Issue no. 4 valid 28 January 2012 – 27 April 2012

element14

The new global face of Farnell

Connect

Product Review

RoadTest

Read expert product review on Agilent's U1272A multimeter and Digilent's chipKIT™ UNO 32 development board

See pages 4 and 40

What's New

theknode

CadSoft EAGLE, Ultra Librarian and Micrium software to complete your design solutions

See pages 38 and 39

Top Deals

We DOUBLED our range of heavily discounted products.

See pages 2 and 3

ENJOY OUR EXCLUSIVE DISCOUNTS ON CONNECT PRODUCTS

RETOOL YOUR EXPECTATIONS

with featured products from

Agilent Technologies

363xA-Series Programmable DC Power Supplies

U8000A Series Single Output DC Power Supplies

U1250 Series Handheld Multimeter

U1270 Series Handheld Multimeter

34410A and 34411A Benchtop Multimeters

ORDER NOW 0800 90 80 80 http://nz.element14.com

BUYING CHOICES THAT FIT YOUR NEEDS

Transact in your local currency online, via phone or through our exclusive buying tools

HOW MAY WE HELP YOU TODAY?

WEBSITE:
http://nz.element14.com

FAX:
0800 90 80 81

POST:
PO Box 74342,
Greenlane, Auckland 1546
New Zealand

ACCOUNT ENQUIRIES:
PHONE: 09 357 0626
FAX: : 0800 90 80 81

MOBILE SITE:
http://m.element14.com

SALES:
nz-sales@element14.com

PHONE:
0800 90 80 80

TECHNICAL SUPPORT:
nz-technical@element14.com

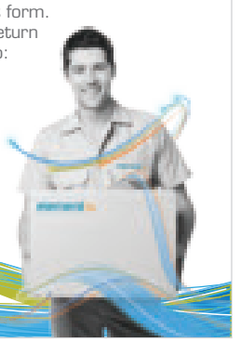
COMPLETE ENGINEERING SOLUTIONS START HERE

Asia Pacific partner for top manufacturers like Texas Instruments, TE Connectivity, and Vishay, as well as a growing range of solutions.

Over 85,000 products in stock in our Sydney warehouse available for same day despatch (when ordered before 6.30pm[1] Monday – Friday).

The element14 guarantee - if you are not 100% happy with your purchase from element14, contact us within 14 days for a return materials authorisation number (RMA)[2]. Call 0800 90 80 80, email nz-sales@element14.com or visit our website and complete the online RMA request form. Upon authorisation, you will need to return the product in its original packaging to:

element14 Returns
300 Richmond Road
Grey Lynn Auckland 1021



VALUE ADDED SERVICES

Expert support from the best in the business including 24/5 technical support via phone, email and live on-line chat, and a global community of experts

http://nz.element14.com/livechat

Account holders can email nz-technical@element14.com or call 0800 90 80 83

Flexible payment options including trade account, cheque, credit card or debit card.

RESOURCES AT YOUR FINGERTIPS

Fast, easy access to the latest technology with over 450,000 in-stock products globally, services, software and solutions from world leading manufacturers, plus hundreds of new products added each week.

Innovative capabilities that save precious time like our industry first online community for engineers, customisable online catalogue, and element14 TV engineering video library.

element14 TV

Software and services to complete your design solutions that you can find quickly through the Knode on element14, an intelligent online search and knowledge tool.

theknode element14

Purchasing tools to simplify your work process such as iBuy, a proprietary purchasing tool tailored to your processes. http://nz.element14.com/ibuy

i-Buy

RoHS Compliant / Non-compliant

RL Re-reeling available

1. Excludes Public Holidays and subject to the element14 "Standard Terms and Conditions of Sale".
2. Some conditions apply. Refer to our "Standard Terms and Conditions of Sale" available on our website.

All products shown in this issue of Connect (the "Publication") are subject to availability, and all sales of these products are subject to the element14 Standard Terms and Conditions of Sale as set out on the element14 website. To obtain a copy, call 0800 90 80 80 or visit http://nz.element14.com. The Publication is valid from 28 January 2012 to 27 April 2012. element14 reserves the right to withdraw any products from sale for legal or commercial reasons. Changes may be made to products by our suppliers. The products in the Publication are intended for use by business customers and not consumers. By ordering, the Customer confirms that he, she or it wishes to obtain the Supplies for the purposes of his, her or its business and not as a consumer. While every effort has been made to ensure the accuracy of information in the Publication, element14 does not warrant the accuracy or completeness of the information and accepts no liability for errors in, or omissions from, the Publication, including those arising from our negligence. All savings shown in the Publication are against the price on the element14 website (http://nz.element14.com) as at January 2012. Savings exclude any other discounts of offers. Prices in the Publication exclude delivery and GST and are inclusive of any discounts referred to in the Publication. Standard 14 days Returns Policy does not apply to computers and peripherals, software, batteries, books and specially constructed items. The Publication is produced by element14, a trading name of element14 Limited, GST Reg No. 55-796 327, PO Box 74342, Greenlane, Auckland, 1546, New Zealand.

Welcome to element14 Connect

CONNECT IS NOW EVEN BIGGER AND BETTER

We have broadened our product range and nearly doubled our product offering. Inside you'll find our buyers' pick of the best new products together with a host of great offers. With featured product reviews and over 800 items to choose from, it doesn't matter whether you require products for design or repair, you're bound to find something to interest you!

With Connect you will be able to:

- **Browse our special offers page for great savings**
- **Browse our latest and best-selling products**
- **Take advantage of hot prices and save**
- NEW **Read expert product review on Agilent's U1272A handheld multimeter and Digilent's chipKIT™ UNO 32 development board**
- NEW **Take a look at what your peers are searching for online**
- NEW **Find out about the Knode from element14**

"It's easy to order. Call, fax, email or go online with the order codes and quantities you want and how you want to pay. **And remember to say you saw it in Connect.**"

Peter Davis,
Regional Director Australia and New Zealand

Contents

Test & Measurement 5
Batteries 11
Torches and Lighting 12
Soldering and Desoldering 13
Connectors and Relays 18
Connectors 20
Cable and Wire 21
Storage 22
Tools 23
Power & Line Protection 31
Electromechanical Products 32
Passives & Semiconductors 34
Optoelectronics 35
Prototyping Accessories 37
Development Tools 41

Features

Specials 2
Agilent U1272A Road Test 4
Top searched products online 36
Knode – Right solutions for your design 38
chipKIT™UNO 32 Road Test 40

WE WELCOME YOUR FEEDBACK!

Email your comments and suggestions to nz-feedback@element14.com

P 2 Date: 20-01-12 time: 11:00

Specials

Deluxe LED Headband Magnifier Kit

- Detachable triple LED spotlight with magnetic base for separate use
- 4 precision ground inter-changeable lenses:
- Covering all focal lengths from semi close-up to very close-up
- Plastic protection case for lenses & cleaning cloth
- Plastic infill for headband when LED used separately

40% OFF

Only **$62.96**

ORDER CODE 182-644501

12 Compartment Storage Box

- No. of Compartments - 12
- Dimensions H x W x D (mm) 40 x 180 x 130

50% OFF

Only **$4.23**

ORDER CODE 386-190901

LED Head Torch

- 12 x high intensity LEDs (100,000 hours average life)
- 4 mode operation - 4 LED, 8 LED, 12 LED, 12 LED Flashing
- Adjustable position head for work area focus
- Torch head dimensions (WxHxD): 70 x 55 x 60mm
- Requires 3 x AAA batteries (not supplied)

50% OFF

Only **$9.72**

ORDER CODE 173-663801

44 Compartment Cabinet Organiser

- Heavy duty, steel construction
- Lacquered finish to stop rust
- Impact resistant, clear plastic drawers
- Stand-alone or wall-mountable
- Retaining lip
- Dimensions (HxWxD): 510 x 306 x 147mm

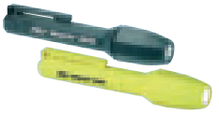
50% OFF

Only **$19.56**

ORDER CODE 136-709101

MityLite™ - Intrinsically Safe Torch

Hostile Environments



- Submersible to 150m
- ATEX Approved (Zone 2)
- Pre-focused Xenon beam
- Compact, just 12cm long
- Complete with light bender and 2 AAA batteries
- Lifetime guarantee

50% OFF

Ideal as a general utility pocket torch. Massive 6,000 candle-power output.

	Order Code	Price Each
Black	677-39501	32.15
Neon Yellow	677-40101	41.20
Replacement Lamp Module	677-41301	17.25

Bulk Tape Dispenser

- Angled blade for easy cutting
- For tapes 50mm width x 66m. Core size 76mm.

50% OFF

Only **$10.83**

ORDER CODE 135-692901

Desoldering Gun - Standard

50% OFF

Description	Order Code	Price Each
Standard gun	419-01101	45.50
Spare PTFE nozzle	100-51801	7.26
Spare neoprene washer	100-51901	1.78
Spare nylon washer	100-52001	1.16
Spare circlip	100-52101	0.29
Spare main spring	100-52201	2.29

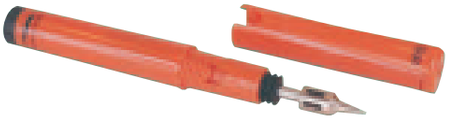
Pen Type Glass Fibre Brush

Pen type holder with glass fibre brush for fine cleaning of metallic components. The brush can be adjusted to give differing degrees of stiffness.

50% OFF

Description	Order Code	Price Each
Micro scratch brush	142-155301	19.02
Box of 10 refills	142-155501	19.56

Gas Soldering Iron - 'Portasol'



50% OFF

- Temperature variable up to 400°C
- Heat output equivalent to a 10 to 60W soldering iron
- One refill gives up to sixty minutes continuous use
- Safety gas cut off cap incorporating a flint lighter

Note: For safety reasons the iron is supplied discharged of gas.

Only **$41.58**

ORDER CODE 148-63601

Hi-Vis Tape Measures

- Tape measures in high visibility plastic housing
- Thumb operated blade lock
- Belt clip and wrist strap

50% OFF

Length	Width	Colour	Order Code	Price Each
3m/10ft	13mm	Yellow	136-703301	1.69
5m/16ft	19mm	Orange	136-703401	2.49
8m/26ft	25mm	Green	136-703501	3.82

BNC to Crocodile Clip Lead

A common test lead for electronics applications. Connects to oscillo-scopes, frequency counters, function generators, etc. Manufactured from 50Ω coaxial cable.
IEC1010 rating: 30V AC, 60V DC.

50% OFF

Only **$6.35**

ORDER CODE 428-422701

RG58CU 50Ω

- High quality RG58 cable
- 19/0.18mm stranded tinned copper conductor
- Solid polyethylene dielectric
- 90% plain copper braid coverage
- Insulated in Black PVC

Capacitance	100pF
Nominal outside diameter	4.95mm
Impedance	50Ω

50% OFF

Only **$108.17**

ORDER CODE 121-935701

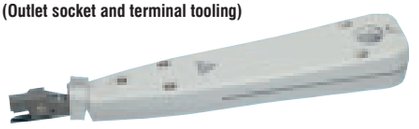
C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 3 Date: 20-01-12 time: 11:00

IDC Hand Tool

(Outlet socket and terminal tooling)

KRONE



50% OFF

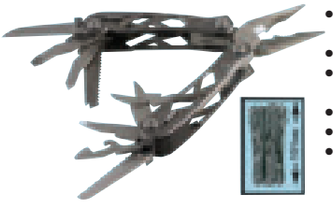
- Plastic bodied with hardened steel jaws
- Terminates and trims wire to correct length in one movement
- Pull out wire extractor housed in the body
- For Use With: LSA-PLUS IDC Terminations
- Series: 2A

Only **$49.14**

ORDER CODE 147-89401

'Suspension' Multi-Tool

GERBER



- Tool Body Material: Stainless Steel
- Length: 164mm
- Handle Type1: Spring Loaded
- Jaw Type: Serrated
- Material: Stainless Steel
- Weight: 190g

50% OFF

Only **$74.89**

ORDER CODE 129-311001

13 Piece Long Arm Ball Ended Hex Key Sets

DURATOOL

- High quality chrome vanadium steel
- Extra long arm for deep insertions of hex nuts or screws
- Chamfered ball point end on one side allows user to work at angles up to 25°

50% OFF

Metric: 1.27, 1.5, 2, 2.5, 3, 3.5, 4, 5, 5.5, 6, 7, 8, and 10mm
Imperial: 0.05, 1/16, 5/64, 3/32, 7/64, 1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 5/16, and 3/8"

Description	Order Code	Price/Set
13PC Metric	**151-781401**	25.10
13PC Imperial	**151-781501**	15.52

6 Piece Precision Insulated Screwdriver Set

DURATOOL

- Soft grip handles with swivel tops for added control
- Blade length: 75mm; Overall length: 165mm
- Tip sizes:Slotted: 2, 3, 4mm; Phillips: PH00, PH0, PH1

50% OFF

Only **$24.25**

ORDER CODE 144-760401

Switch Key

50% OFF

Contents:

- 6mm, 8mm, square, 9mm triangular and 5mm double pin type keys
- Tooling adaptor for 1/4" hex bits
- Double ended screwdriver bit, 7mm slotted x Phillips No.2

Only **$25.37**

ORDER CODE 128-327201

Surface Mount Resistor Kits

multicomp

50% OFF

E12 Series Kits 0, 10, 12, 15, 18, 22, 27, 33, 39, 47, 56, 68, 82 (100 of each value)
E24 Series Kits 0, 10, 11, 12, 13, 15, 16, 18, 20, 22, 24, 27, 30, 33, 36, 39, 43, 47, 51, 56, 62, 68, 75, 82, 91 (100 of each value)
Contents: E12 kits 62 values, E24 kits 121 values

- Ring binder surface mount resistor kits
- 5% and 1% tolerance options

SMD

Size	Contents	Tolerance	Order Code	Price Each
0603	E24	±1%	**933-165401**	223.40
0805	E24	±1%	**933-367301**	233.96
0805	E12	±5%	**933-498001**	157.91
1206	E24	±1%	**933-696601**	233.96

Crimp Tool

DURATOOL

50% OFF

Crimping Capacity			
AWG	20-18	16-14	12-10
mm^2	0.5-1	1.5-2.5	4-6
	Red	Blue	Yellow

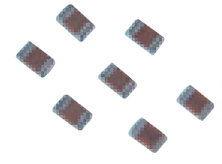
Only **$35.20**

ORDER CODE 312-635301

General Ceramic Chip Capacitors Kit

0603 (6.3 to 50 VDC)

multicomp



- Chip ceramic capacitor in 6.3V, 10V, 16V, 25V and 50V
- Temperature characteristics: C0G, U2J, X7R, X6S, X5R, Y5V
- No Polarity
- Nickel barrier with Tin layer termination.
- Suitable for reflow soldering.

40% OFF

SMD

0603 case size: L=1.6±0.1, W=0.8±0.1, H=0.7 to 0.9, P=0.25 to 0.65

Only **$173.74**

ORDER CODE 176-070201

Offset Ring Ratchet Wrench

Metric, 5 Piece Set

DURATOOL

- Chrome vanadium steel body and hardened sockets
- 5 piece set containing: 6x8, 10x12, 11x13, 15x17, 19x21mm

50% OFF

Only **$62.81**

ORDER CODE 312-808801

Single-Sided Stripboard

multicomp

- Single Sided Bakelite
- Tin Plated Copper strips
- Track free border - Top & Bottom

HOT PRICE

Matrix Pitch	L (mm)	W (mm)	Strips (mm)	Rows (mm)
0.1"	117	368	41 x 1.9	144

Only **$15.31**

ORDER CODE 942-323001

6 Piece Tap and Wrench Set

DURATOOL

Kit includes:

- T-bar wrench, M3 x 0.5, M4 x 0.7, M5 x 0.8, M6 x 1.0, M8 x 1.25mm

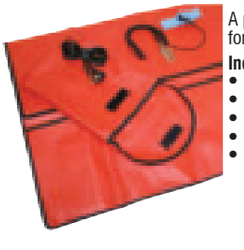
50% OFF

Only **$13.40**

ORDER CODE 144-754001

ESD Field Service Kit

multicomp



A portable workstation kit designed for field service use.

30% OFF

Included:

- Red Pouch
- Mat (Size:545x590mm)
- 10mm Wrist Band
- Coiled Earth Lead (10mm - Banana)
- Straight Eart Lead (Banana - Banana with Croc. Clip)

Only **$81.11**

ORDER CODE 168-789201

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 4 Date: 20-01-12 time: 11:00

RoadTest

Agilent Technologies U1270 Series

U1272A Handheld Digital Multimeter

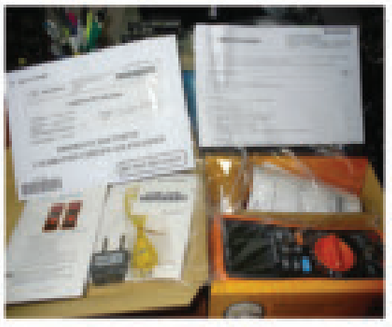
SCORING	
Product Performed to Expectations:	9
Specifications were sufficient to design with:	10
Demo Software was of good quality:	10
Demo was easy to use:	8
Support materials were available:	10
The price to performance ratio was good:	9
Total Score:	56

Review by John Boxall, tronixstuff.com

Agilent Technologies U1272A water and dust resistant digital multimeter, is an extremely well specified instrument, and according to the Agilent promotional material a better alternative to the venerable Fluke 87V. So let's dive in and take a look.

Initial impression

The retail box as always is impressive and well decorated. Opening it up reveals a range of items:



Including the meter itself, a calibration certificate and calibration results sheet, probe set, thermocouple, quick start guide and four AAA cells. A carrying case is not included, however it is available from au.element14.com; search for Agilent part number U1174A. For those interested, a full range of documentation is available at: http://bit.ly/ewASUg. The meter measures 207 x 92 x 59 mm (hwd) and is quite solid, not too heavy and surrounded by a good orange non-slip rubber layer. It is refreshing to see that the keypad is laid out in an organised way.

The meter

Installing or changing the battery (four AAA cells) is easily accomplished, and thankfully the fuses are also in the same compartment. The dust and moisture protection is evident as shown by the o-ring seal around the perimeter of the compartment.

As mentioned earlier, the U1272a is water and dust resistant to IP54 specifications. The included test leads are just over 1200mm in length and are rated at Cat III 1000V, 15A. Two pairs of probes are included, with 4mm and 19mm tips.

Unfortunately alligator-clip adaptors nor probes are included - these are very useful especially to those who are colour blind and need to sort resistors or measure tiny through-hole capacitors. Furthermore, a K-type thermocouple and non-compensation transfer adaptor are also included.

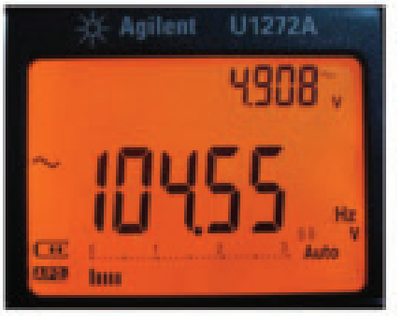
The thermocouple's temperature range is -20~200°C, however with an optional thermocouple the maximum temperature can be increased to 1200°C. As for the other measurement ranges, they are:

- DC Voltage - 300 mV ~ 1000V at 0.05%
- AC Voltage - 300 mV ~ 1000V at 0.07%
- DC Current - 300 uA ~ 10A at 0.2%
- AC Current - 300 uA ~ 10A at 0.6% within a bandwidth of 45 ~ 2 kHz
- Resistance - 30 ~ 300 M Ω at 0.2%
- Capacitance - 10 nF ~ 10 µF at 1%
- Temperature with K-type thermocouple -200 ~ 200°C (1372°C with optional thermocouple) at 1%

Furthermore there is a diode test function, and a continuity beeper. The backlight also flashes when using the continuity function which would be very convenient for those working in a noisy environment.

In use

Although readers would not have any problem using the meter without reading the manual, doing so will illustrate the particular features of the U1272A as well as operation of the menu system that allow various settings to be changed. These can include: beep frequency (!), backlight duration, data communication parameters, default temperature units, scale conversion values, and activating the low-pass filter available when measuring DC voltage and current. At the risk of shortening the battery life, I extended the backlight duration immediately to thirty seconds; and set temperature units to degrees Celsius.



When taking measurements that only require the main numeric display, the ambient temperature is shown in the secondary numeric display. I must admit to discovering another feature by accident, if the leads are in the current and COM terminals and you select a non-current measurement function - the meter will beep like crazy, blink the backlight and show an error message. This is useful when you're tired and probably should be doing something else...

Read the full review of the Agilent U1272A at http://au.element14.com/connectreview or http://nz.element14.com/connectreview and don't forget to leave your comments and questions.

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 5 Date: 20-01-12 time: 11:00

U1270 Series Handheld Digital Multimeters

Incudes: Standard test leads, test probes with 19mm and 4mm tips, K-type thermocouple and adapter, 4x AAA batteries, certificate of calibration, test report, quick start guide.

- Z_{LOW} (U1272A), Smart Ω (U1272A), Low Pass Filter, Qik-V (U1271A)
- 30000-count dual display
- CAT III 1000 V, CAT IV 600 V safety rating
- Easy maintenance - convenient fuse and battery access
- Easy connectivity to PC with optional IR-USB cable
- Internal memory for data logging
- Visual (Backlight Alert) and audible continuity indication
- Ergonomic shape for better grip
- IP 54 certified - water and dust resistant

	U1271A	U1272A
AC Bandwidth	20kHz	100kHz
True RMS	AC	AC + DC
Voltage AC/DC	30mV to 1000V	30mV to 1000V
Current AC/DC	300µA to 10A	300µA to 10A
Resistance Range	30ohm to 300Mohm	30ohm to 300Mohm
Frequency Range	99.999Hz to 999.99kHz	99.999Hz to 999.99kHz
Capacitance Range	10nF to 10mF	10nF to 10mF

Description	Mftrs. List No.	Order Code	Price Each
Handheld Multimeters U1271A	U1271A	**184-865601**	546.63
Handheld Multimeters U1272A	U1272A	**184-865701**	595.95
Accessories			
Probe Clip Light	U1176A	**184-865801**	21.18

U1253B Handheld Digital Multimeter

With the world's first OLED handheld DMM, the U1253B, you get crystal-clear measurements indoors, in the dark, off-angle situations, on the bench or on the go.

Display resolution	50,000 counts OLED display
AC bandwidth	100 kHz
True RMS	AC + DC
Voltage AC/DC	1000 V, 0.025%
Current AC/DC	10 A, 0.05%
Resistance	500MΩ, 0.05%
Frequency	20MHz, 0.02%
Capacitance	100mF, 1.00%
Temperature	-200°C to +1372°C, 0.30%
Battery	7.2V (Rechargeable)
Operating temperature	-20°C to 55°C
Over-voltage safety protection	CAT III 1000V
CE, CSA, UL compliance	CE, CSA

Only
$706.92
ORDER CODE **178-032701**

Programmable DC Power Supplies

E363xA Series

- Single and triple outputs
- 80W to 200W output power
- Dual output ranges (except E3631A)
- Low noise and excellent regulation
- High accuracy and resolution
- Remote sense (except E3631A)
- Front and rear output terminals (E3633A only)
- GPIB and RS-232 standard

Model	Max Power	Output 1	Output 2	Output 3
E3631A	80W	6V, 5A	25V ,1A	-25V, 1A
E3632A	120W	Range 1: 15V, 7A Range 2: 30V, 4A		
E3633A	200W	Range 1: 8V, 20A Range 2: 20V, 10A		

Mfrs. List No.	Order Code	Price Each
E3631A	**121-448701**	2,014.87
E3632A	**121-448801**	1,784.71
E3633A	**121-448901**	2,117.62

Single Output DC Power Supplies

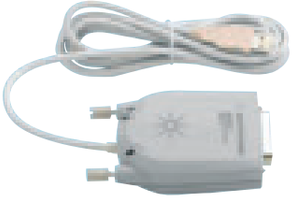
U8000A Series

- Excellent load and line regulation:(CV: <0.01% +2 mV;CC: <0.02% + 2mA)
- Low output noise: 1 mVrms (20 Hz to 20 MHz)
- Over Voltage and Over Current Protection
- Standby output for safety purposes
- Save-and-recall function up to three memory states

Mftrs. List No.	Description	Order Code	Price Each
U8001A	90W Power Supply, 30V/3A DC	**163-731101**	483.88
U8002A	150W Power Supply, 30V/5A DC	**163-731201**	606.77

I/O Hardware for PC-Instrument Communication

82357B USB/GPIB Interface



- Fast and easy connection to GPIB instruments
- Maximum GPIB transfer rate of more than 1.15 MB/s
- An easy way to add GPIB connectivity, especially for notebook computers
- No external power supply necessary

Mfrs.List No.	Description	Order Code	Price Each
82357B	USB/GPIB Interface	**142-567901**	763.09
Cable Assembly GPIB			
10833A	1m	**121-452601**	113.13

6½ Digit High-Performance DMM

34410A and 34411A

Included: Test lead kit with probes and SMT attachments, test report, power cord, USB interface cable, product reference CD-ROM and software

34410A:
- 10,000 readings/sec @ 5½ digits direct to PC
- 1,000 readings/sec @ 6½digits direct to PC
- 30 PPM 1 year Basic DC accuracy
- LAN, USB & GPIB standard
- 2-wire and 4-wire resistance and diode test
- Data logger with 50 K reading non-volatile memory

34411A Additional Features:
All the features of the 34410A, plus:
- 50,000 readings/sec @ 4½ digits direct to PC
- 1 Million reading memory
- Analog level triggering
- Programmable Pre/Post triggering

Specifications	Ranges		
AC Voltage	100mV to 750V	Resistance	100Ω to 1GΩ
		Capacitance	1nF, 10nF, 100nF, 1µF, 10µF
DC Voltage	100mV to 1kV	Temperature	-80°C to +150°C
AC Current	100µA to 3A	Frequency	3Hz to 300kHz
DC Current	100µA to 3A		

Mfrs.List No.	Order Code	Price Each
34410A	**144-037601**	2,041.53
34411A	**144-037701**	3,179.50

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 6 Date: 20-01-12 time: 11:00

Fluke 114 Electrical Multimeter

FLUKE

Included: Holster, 9 V battery, Test leads, User manual

- Automatic AC/DC voltage selection
- Resistance and continuity
- Large white LED backlights
- Min/Max/Average

Only
$237.50
ORDER CODE 127-459801

Fluke 115 Field Service Technicians Multimeter

FLUKE

Included: Holster, 9 V battery, Test leads, User manual

- Resistance, continuity, frequency, capacitance, and diode test
- True-rms readings
- Min/Max/Average
- CAT III 600 V safety rated

Only
$275.00
ORDER CODE 127-459901

Fluke 233 Remote Display Digital Multimeter

FLUKE

Included: Getting Started Manual, AA Batteries installed, Test leads, AC72 Alligator clips, 80BK-A Temperature Probe,User manual (CD-ROM)

Wireless Range	30 Ft
Safety Rating	CAT III 1000 V CAT IV 600 V
Size (H x W x L) cm	5.3 x 9.3 x 19.3
Weight	604 g

Only
$500.00
ORDER CODE 177-209201

Fluke 179/EDA2 Industrial Combo Kit

FLUKE

Included:Fluke 179 True-RMS DMM, Fluke C35 Soft Case, TL910 Electronic Test Probes, TL224 SureGrip™ Silicone Test Leads, AC280 SureGrip™ Heavy Duty Hook Clips, Fluke 80BK, Integrated Temperature Probe, ToolPak™ Meter hanging accessory

Only
$537.50
ORDER CODE 128-967401

170 Series Digital Multimeters

FLUKE

Included: 80BK Temperature Probe (179 only), TL75 test leads, installed 9V battery and user manual

Mftrs List No.	Order Code	Price Each
FLUKE 175EGFID	**355-867801**	421.07
FLUKE 177	**355-868001**	462.50
FLUKE 179	**355-869101**	475.00
FLUKE 179/TPAK	**413-401101**	500.00

Fluke 117/322 Electrician's Combo Kit

FLUKE

The **Electrician's Combo kit** (117/322) pairs the new Fluke 117 DMM with a Fluke 322 clamp meter and is the perfect solution to meet the demands of Electrical Professionals

	Maximum	Max. Resolution
AC/DC Voltage	600V	1mV
DC Current	10A	1mA
AC Current	10A	10mA
Resistance	40MΩ	0.1Ω
Capacitance	10mF	1nF
Frequency	50kHz	0.01Hz

Description	Mfrs. List No.	Order Code	Price Each
Multimeter	117	**127-460201**	337.50
Combo Kit	117/322 KIT	**127-460301**	500.00

Fluke 80 Series V Industrial Multimeters

FLUKE

Included: TL75 test leads, AC72 Alligator Clips, Holster, 9V battery (installed), Getting Started Manual, CD with detailed manual, 80BK temperature probe (87V)

Mftrs. List No.	Order Code	Price Each
83V	**736-348601**	650.00
87V	**736-349401**	662.50
87V/E2 Kit	**127-283301**	735.97

Model: 72-7730 TRMS Multimeter with USB Interface

TENMA

- True RMS measurement
- AC and DC measurement
- Selectable auto/manual range
- Data logging and data recall
- Peak hold and data hold
- Max/min mode and relative mode
- 4-20mA current loop measurement
- Accuracy of a 19,999 count display

Supplied with 100mm opto-coupled USB cable, data logging software, test leads, short clip leads, alligator clip adaptors, battery, soft case and manual.

Only
$209.55
ORDER CODE 128-364201

Palm Size Digital Multimeter 72-7770

TENMA

Autoranging meter features a wide range of measurement capabilities. 1999 count display measures AC/DC voltage and DC current, ohms and diode check.

- 1/2" high LCD digital
- Diode test
- Data hold
- Protective holster
- Includes test leads, standard 9V battery and owners manual
- Meets 600V CATI standards

Only
$15.61
ORDER CODE 743-056601

Digital Multimeters

TENMA

72-7720 and 72-7725 Features

- Max Voltage - 750VAC and 1000VDC
- Max AC and DC Current- 20A
- Max Resistance - 200MΩ
- Capacitance - 2nF to 100µF

72-7725 Only

- Frequency - 20KHz
- Temperature - -40°C - 1000°C

Mftrs. List No.	Order Code	Price Each
72-7720	**743-057401**	32.83
72-7725	**743-058201**	39.37

LCR Multimeter 72-8155

TENMA

	Range
Resistance	200ohm, 2kohm, 20kohm, 200kohm, 2Mohm, 20Mohm
Capacitance	2nF, 20nF, 200nF, 2µF, 20µF, 200µF, 600µF
Inductance	2mH,20mH,200mH,2H,20H

Only
$62.27
ORDER CODE 128-364301

Autoranging Multimeter with RS-232

TENMA

72-7750

Included : standard test leads, short leads, 4' opto-coupled RS-232 cable with female DB9 connector and datalogging software

- Switchable auto/manual range
- Diode check plus continuity buzzer
- Large backlit LCD display
- Data hold
- 3 ¾ digit, 5999 count display
- Meets 600V CATIII, and 1000V CATII standards

Only
$158.80
ORDER CODE 743-062001

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

TRMS Multimeter with USB Data Logging

TENMA

72-7732

A high performance, intelligent multimeter with a USB interface and 9999 record datalogging.

- 40,000 count LCD display with bargraph
- Full icon display and dual backlight
- TRMS measurement

Only **$221.63**

ORDER CODE 156-371901

Fluke 374 & 375 True-RMS AC/DC Clamp Meters

FLUKE

Fluke 374 & 375	Range
AC Current via Jaw	600 A
AC Current via iFlex (optional)	2500 A
DC Current	600 A
AC and DC Voltage	600 V
Resistance	60K Ω (375) 6K Ω (374)
Frequency (375 only)	500 Hz
Capacitance	1000 µF

Mftrs. List No.	Order Code	Price Each
FLUKE 375	**182-717601**	742.00
FLUKE 374	**182-717701**	541.72

Fluke 381 Remote Display True-RMS AC/DC Clamp Meter with iFlex™

FLUKE

Included: Clamp meter, iFlex current probe, soft case

AC Current via Jaw	1000 A
AC Current via iFlex	2500 A
DC Current	1000 A
DC and AC Voltage	1000 V
Resistance	60K Ω
Frequency	500 Hz

Only **$963.99**

ORDER CODE 182-717401

Clamp Meters with Frequency

TENMA

Model 72-7226

- True RMS AC measurements

Range			
DC Voltage	400mV to 600V	AC Current	40A, 400A
AC Voltage	4V to 600V	Resistance	400ohm to 40Mohm
DC Current	40A, 400A	Frequency	10Hz to 10MHz
		Duty Cycle	0.1% to 99.9%

Mftrs. List No.	Order Code	Price Each
72-7224	**128-364001**	66.84
72-7226	**128-364101**	101.88

Clamp Meter with Temperature

TENMA

	Range
DC Voltage	200mV to 600V
AC Voltage	2V, 20V, 200V, 600V
AC Current	2A, 20A, 200A, 400A
Resistance	200ohm to 20Mohm
Temperature	-40°C to +1000°C

Only **$30.40**

ORDER CODE 128-363901

Mini True RMS AC/DC Clamp Meter

TENMA

- High accuracy and resolution
- Frequency
- Max/Min, auto zero
- Display hold
- Overload protection
- CE marked
- Large 3¾ digit, 3999 count LCD with bargraph
- Includes two 1.5V 'AA' batteries, carrying case and owners manual

Only **$247.55**

ORDER CODE 342-154501

Fluke 1AC-A1-II VoltAlert

FLUKE

Operating Range	90V to 1000V
Operating Temperature	-10 to 50 °C

Only **$71.18**

ORDER CODE 164-380301

Fluke Instruments

FLUKE

Description	Mftrs. List No.	Order Code	Price Each
Case, Soft Vinyl	C50	**424-00601**	66.23
Carry Case	C90	**424-01801**	65.05
TL75 Test lead set	TL75	**201-28501**	40.21
630mA fuse	740670	**105-55901**	7.62
1A Fuse	830828	**106-66701**	12.70
3A Fuse	475004	**147-61501**	12.70

Bench Top LCD Ammeter

TENMA

- Measures from 0.001mA to 5A DC in four ranges
- Large 18mm four - digit LCD display
- Four position range select switch
- Auto switching polarity and "" Indicates negative polarity
- Meets IEC1010 CAT II 600V
- Dimensions (WxHxD): 117x147x52mm

Only **$76.81**

ORDER CODE 490-840501

Infrared Non Contact Thermometer

TENMA

72-820

- 4 Digit LCD with backlight
- °C/°F measurements
- 12:1 distance to spot ratio
- Sleep mode and low battery warning
- USB or 9V battery power
- Tripod mount
- Supplied with 9V battery, carry bag, USB lead and user manual

Only **$130.49**

ORDER CODE 156-371501

Digital Thermometers

TENMA

72-2060(Single Channel) / 72-2065 (Dual Channel)

- 3½ digit LCD
- Displays T1 and T2 and T1-T2 in differential mode (72-2065)
- Includes holster, 9V battery, owner manual, thermocouple probe (72-2065 includes two thermocouple probes)

Temperature range	-50°C to +1300°C°C -58 to 1999
Accuracy	-15°C to 0°C: ±2°C, 0°C to 1000°C: ±(0.3% + 1°C)
Dimensions	70 (W) x 146.05 (H) x 39 (D)

Mftrs. List No.	Order Code	Price Each
72-2060	**342-155701**	118.94
72-2065	**342-156901**	148.65

From **$118.94**

ORDER CODE 342-155701

Universal Voltage Tester 6-400V

TENMA

72-6793

- A simple low cost voltage tester designed to detect voltages between 6 and 400V AC/DC
- Integral finger guard for added safety
- LED visual indication
- Polarity display
- Indicated voltages: ±6V with polarity display
- 12, 24, 50, 120, 220, 400V AC/DC
- **GS/TUV/CE** safety approved

Only **$35.89**

ORDER CODE 360-688001

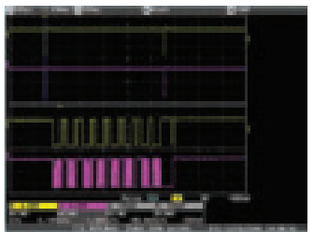
C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 8 Date: 20-01-12 time: 11:00

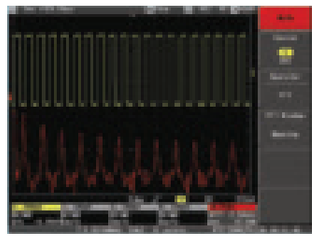
WaveJet Oscilloscope

LeCroy

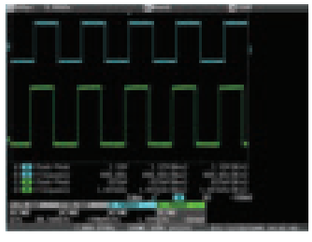
WaveJet WJ354-A



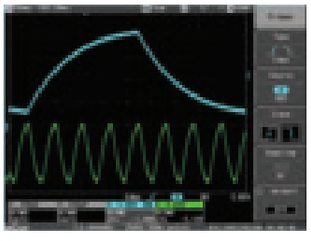
Long Capture Zoom



Math



Measure C3 C4



Slow Sines 2

Key Features:

- 100 MHz, 200 MHz and 350 MHz Bandwidth
- Up to 2 GS/sec real-time sample rate and 100GS/sec interleaved sample rate
- 4 channels
- 7.5" bright, clear, colour TFT screen (VGA, 640 x 480 resolution)
- Intuitive, easy-to-use interface, with auto set-up
- Screen update rate of up to 3,600 waveforms per second
- "Replay" feature allows viewing of up to 1,024 previous waveforms to catch signal glitches and debug more quickly
- Long, fast memory (500,000 points per channel) for long signal capture and analysis
- 26 automatic measurements, waveform maths, FFT and zoom as standard
- Save waveforms and settings to on-board memory, external USB memory or send over USB, LAN, GPIB
- Built-in 6 digit frequency counter
- Now includes USB remote control and USB printing
- 3 year guarantee
- User interface in 9 languages as standard

Bnswidth/Rise Time	Mftrs. List No.	Order Code	Price Each
100 MHz / 3.5 ns	WAVEJET WJ314-A	**169-810901**	5,291.71
200 MHz / 1.75 ns	WAVEJET WJ324-A	**169-811101**	7,085.77
350 MHz / 1 ns	WAVEJET WJ334-A	**169-811301**	9,057.20

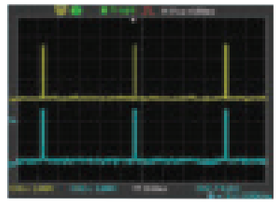
From

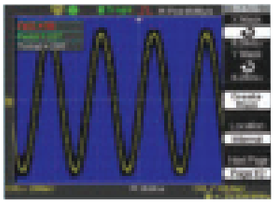
$5,291.71

ORDER CODE 169-810901

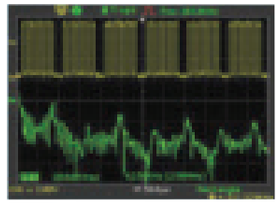
LeCroy WaveAce Digital Oscilloscope

LeCroy

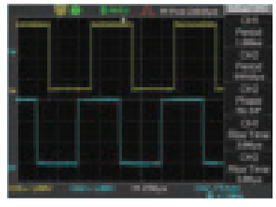




Mask Test



Math



Parameter

Key Features:

- Easyscope remote control software included
- Unique waveform sequence recorder
- Pass/Fail testing
- 60 MHz, 100 MHz, 200 MHz and 300 MHz B/W
- Sample rates up to 2 GS/s
- Long Waveform Memory - 4 kpts/Ch and 8 kpts/Ch configurations
- Advanced Triggering - Edge, Width, Video, Rise Time
- 32 automatic measurements
- Large internal waveform and setup storage
- 4 math functions plus FFT

Bandwidth/ Rise Time	Mftrs. List No.	Order Code	Price Each 1+
40 MHz / 8.8 ns	WAVEACE 101	**179-137401**	1,050.86
60 MHz / 5.8 ns	WAVEACE 102	**163-330701**	1,235.46
100 MHz / 3.5 ns	WAVEACE 112	**163-330801**	1,468.31
100 MHz / 3.5 ns	WAVEACE 212	**163-331001**	2,349.06

From

$1,050.86

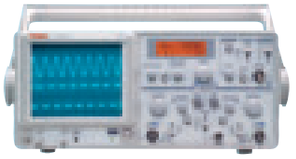
ORDER CODE 179-137401

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 9 Date: 20-01-12 time: 11:00

30MHz Oscilloscope with Frequency Counter

TENMA



Operating Modes	CH1, CH2, DUAL, ADD, X-Y
Sensitivity	1mV/div selectable in 12 steps
Bandwidth	DC to 30MHz
Rise Time	11.7ns

Only
$505.26
ORDER CODE 156-380101

PWS4000 Series DC Bench Power Supplies

Tektronix

Mftrs. List No.

		Order Code	Price Each
PWS4205	20V,5A	182-478701	1,216.00
PWS4323	32V,3A	182-479101	1,216.00

Digital Storage Oscilloscopes

TENMA

- Dual channel
- HD colour LCD display system at 320 x 240 resolution
- Supports plug-and-play USB storage devices

Mftrs. List No.	Bandwidth	Order Code	Price Each
72-8395	25MHz	173-944801	705.49
72-8225	40MHz	173-944301	682.24
72-8230	60MHz	173-944401	780.67
72-8240	100MHz	173-944501	1,107.24
72-8250	200MHz	173-944701	1,667.98

From
$705.49
ORDER CODE 173-944801

Bench Power Supply - Variable Voltage

TENMA

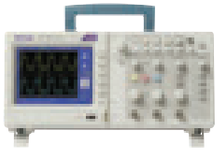
Line Regulation	20mV
Load Regulation	50mV
Dimensions / Weight	150 x 70 x 250mm / 2kg

Output Voltage/Current	Mftrs. List No.	Order Code	Price Each
(1-60)V/ (0-1.6)A	72-8340	157-342601	178.84
(1-36)V/(0-3)A	72-8345	157-342701	184.17
(1-20)V/(0-5)A	72-8350	157-342801	178.84

Digital Storage Oscilloscopes

Tektronix

TDS1000C-EDU Series



Ideal for first-time oscilloscope users and students.The TDS1000C-EDU includes an Education Resource CD filled with tools to help you master the use of an oscilloscope.

Mftrs. List No.	Bandwidth	Order Code	Price Each
TDS1001C-EDU	40MHz	187-749701	1,029.00
TDS1002C-EDU	60MHz	187-749801	1,290.00
TDS1012C-EDU	100MHz	187-749901	1,546.00

Bench Power Supply

TENMA

Single output - 3 Voltage / Current Ranges

Range	Output Voltage	Output Current
1	16V	5A
2	27V	3A
3	36V	2.2A

Line Regulation	4mV
Load Regulation	20mV
Voltage supply	90V
Frequency supply	47Hz

Only
$262.38
ORDER CODE 157-342901

TDS2000C Oscilloscopes 50MHz-200MHz

Tektronix

TDS2024

Key Performance Specifications:
- Up to 2 GS/s Sample Rate on All Channels
- 2.5k point Record Length on All Channels

- Advanced Triggers including Pulse Width Trigger and Line-selectable
- Video Trigger

Mftrs. List No.	Description	Order Code	Price Each
TDS2001C	50 MHz, 2 Ch, 500 MS/s	184-096101	1,160.00
TDS2002C	70 MHz, 2 Ch, 1 GS/s	184-096201	1,412.00
TDS2004C	70 MHz, 4 Ch, 1 GS/s	184-096301	2,131.00
TDS2012C	100 MHz, 2 Ch, 2 GS/s	184-096501	1,692.00
TDS2014C	100 MHz, 4 Ch, 2 GS/s	184-096601	2,544.00
TDS2022C	200 MHz, 2 Ch, 2 GS/s	184-096701	2,411.00
TDS2024C	200 MHz, 4 Ch, 2 GS/s	184-096801	2,971.00

Tektronix Digital Multimeter

Tektronix

DMM4040 & DMM4050

Features & Benefits
- 6.5 Digit Resolution
- Basic VDC Accuracy of up to 0.0024% (1 yr.)
- 100 mV to 1000 V Voltage Range, with up to 100 nV Resolution
- 100 µA to 10 A Current Range, with up to 100 pA Resolution

Mftrs. List No.	Description	Order Code	Price Each
DMM4040	Digital Mutlimeter Precision 35PPM	177-190201	1,461.00
DMM4050	Digital Mutlimeter Precision 24PPM	177-190301	1,802.00

DPO2000 Series Oscilloscopes

Tektronix

Mftrs. List No.	Description	Order Code	Price Each
DPO2012	Oscilloscope, DPO 2CH 100MHz	165-036701	2,508.00
DPO2014	Oscilloscope, DPO 4CH 100MHz	165-036801	3,397.00
DPO2024	Oscilloscope, DPO 4CH 200MHz	165-036901	4,079.00

Replacement DMM Test Lead Sets

Pomona Electronics

Model No.	Probe Tip	Plug Type
5519A	Standard Nickel/brass	Right angle DMM
6365	Standard Nickel/brass	Straight DMM
5898	Stainless steel	Right angle DMM
5309A	Stainless steel	Stacking banana

Mftrs. List No.	Order Code	Price Each
5519A	413-594501	36.64
6365	413-595701	33.46
5898	413-597001	39.75
5309A	413-598201	38.07

Passive 10X Voltage Probes

Tektronix

TPP0100/TPP0101

- 10X Attenuation
- 100 MHz Bandwidth
- 1.3 m Length
- UL61010-031;2007, CAN/CSA C22.2 No. 61010-031-07, IEC61010-031; IEC 61010-031/A1:2008

Mftrs. List No.	Description	Order Code	Price Each
TPP0101	Passive Probe, 100MHz	184-096901	93.00
TPP0201	Passive Probe, 200MHz	184-097001	115.00
TPP0101-PK10	Passive Probes, 100MHz, Pack of 10	184-097101	845.00
TPP0201-PK10	Passive Probes, 200MHz, Pack of 10	184-097201	1,033.00

Fully Insulated Alligator Clips

TENMA

Features:
- Fully insulated 4mm alligator clips
- Wire insulated piercing feature
- CE marked meets IEC-1010, 1000V, CATIII, 20A

Mftrs. List No.	Order Code	Price Each
76-0124 Red	342-171501	8.03
76-126 Black	342-172701	8.39

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 10 Date: 20-01-12 time: 11:00

Semiconductor Component Analyser

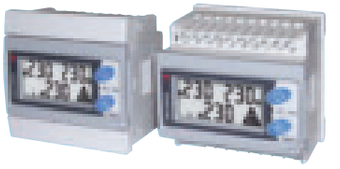
PEAK

Supports transistors (germanium and silicon),darlingtons,MOSFETs,Junction FETs, low power thyristors and triac s, LEDs (including bicolour types),diodes and diode networks.

Description	Mftrs. List No.	Order Code	Price Each
Red Analyser	DCA55R	**372-744001**	98.96
Translucent Blue Analyser	DCA55T	**372-747601**	98.96
Probes Kit (Includes SMD03, CRC01, XKM04)	PTP03	**783-026201**	69.81
Testers Kit	LCR40+DCA55+ATC55	**783-027001**	233.93

3-Phase Energy Management Meter

EM21 72D - Removable Display Unit



One instrument with double mounting capability (DIN-rail mounting or panel mounting).Suitable for both active and reactive energy metering for cost allocation as well as main electrical parameter measurement and retransmission (transducer function).

Mftrs. List No.	Order Code	Price Each
EM21-72D.AV5.3.X.0.XX	**182-477401**	225.59
EM21-72D.AV5.3.X.0.SX	**182-477501**	360.93

3MHz Function Generator

TENMA

- Frequency range: 0.3Hz to 3MHz in 6 ranges, accuracy ±5%
- Waveforms: Sine, Triangle, Square, Ramp, TTL and CMOS output
- External voltage controlled frequency (VCF) function
- Duty cycle control with signal inversion capability
- Variable DC offset control
- Two-step (-20dBx2) and variable attenuator
- Built-in 6 digit counter with INT/EXT function up to 150MHz /high resolution

Only **$449.63**

ORDER CODE 507-450201

Laser Optical/Contact Tachometers

Included: Foam padded carry case, 700mm reflective tape, contact adaptor, cone, funnel and surface wheel

- Optical distance detector - 50mm to 500mm
- Last measured value and Min/Max memory updated automatically

Only **$107.62**

ORDER CODE 462-597301

Digital Current Calibrator

TENMA

An easy to use portable,hand-held instrument for calibrating process devices.

- Adjustable 0 - 24mA current source
- Drives load up to 500Ω
- Includes owner manual,test lead and battery

Only **$176.99**

ORDER CODE 356-268201

LAN Tester & Multimeter

TENMA

- 2,000 Count LCD display
- Verifies correct wiring of 10 Base-T & 10 Base Thin Ethernet, RJ-45, RJ11, RJ12 and BNC network cables
- Autoranging multimeter functions
- Selectable auto/manual range selection
- Max & Data hold
- Rugged overmoulded housing

Only **$67.00**

ORDER CODE 174-943301

Humidity,Temperature & Dewpoint USB Data Logger

LASCAR

40% OFF

- Simple USB interface
- Over 16,000 temperature readings and 16,000 humidity readings
- Memory rollover function for continuous logging
- Supplied with replaceable internal lithium battery

Only **$118.11**

ORDER CODE 169-277701

Digital Sound Lever Meter

TENMA

20% OFF

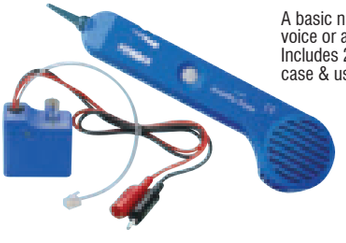
- 3 ranges, 35-130dB measurement
- 3½ digit LCD
- Meets **IEC 651** type 2 standards
- Over and under range indicator
- Data hold
- Requires 9V battery (not included)
- **CE** marked

Only **$161.42**

ORDER CODE 356-265701

Tone & Probe Set

TENMA



A basic necessity for anyone running data, voice or any other low voltage cable. Includes 2x9V batteries, belt loop, carry case & user guide.

Only **$91.81**

ORDER CODE 174-943401

Metal/Power/Stud Sensor 72-6792

TENMA

- Electronically locates hidden cables gas and water pipes
- Traces hidden ceiling joists and wall studs
- Senses presence of mains voltage
- Audible and visual indication

Only **$17.00**

ORDER CODE 360-687901

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 11 Date: 20-01-12 time: 11:00

Alkaline High Voltage Battery

- Miniature 12V and 6V batteries
- Fits popular makes of cameras and electronic lighters
- Fits vehicle alarm remote key fobs
- GP23A fits Steinel continuity and voltage testers

Mftrs. List No.	Order Code	Price Each
GP23A	300-40801	2.22
GP27A	724-05101	2.22
GP11A	908-57501	1.30

Coin Cell Holders

30% OFF

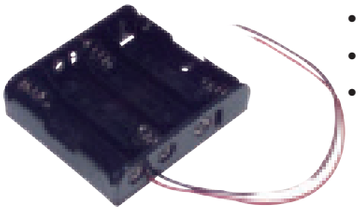
- A range of PCB mountable coin cell holders
- PCB connections via solder pins
- Contacts are spring steel nickel plate and copper
- Suitable for single cells only

Cell Dia.	Order Code	Price Each
12mm	302-983901	2.11
12mm	908-63001	3.53
16mm	676-48201	3.11
20mm	676-46901	5.29
20mm	302-982701	2.79
24mm	676-47001	2.54
24mm	302-981501	3.07

Industrial Alkaline Batteries

Type	Pack Qty	Order Code	Price Per Pack
AAA	4	152-047801	5.96
AA	4	152-047901	5.41
C	12	152-048001	20.25
D	12	152-048101	22.52
PP3	12	152-048201	38.40

AA" Size Battery Holders



- Holds Four (4) AA" batteries in Series
- Battery Holder Mount: Through Hole
- 6" Wire Leads (Red & Black): #26AWG, Tinned, .187 end strip UL/CSA1007

Only **$2.20**

ORDER CODE 165-068501

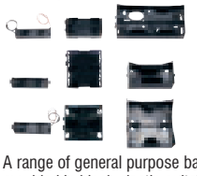
Alkaline Manganese- PROCELL Bulk Packs

DURACELL

Type	Pack Qty	Order Code	Price Per Pack
AAA	24	471-688701	18.34
AA	24	471-687501	20.28
C	12	471-689901	20.63
D	12	471-690501	30.94
PP3	12	471-691701	35.88

Battery Holder Single/Multicell

pro-POWER



30% OFF

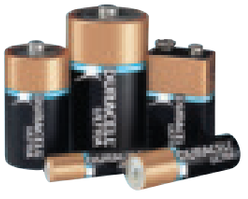
A range of general purpose battery holders moulded in black plastic suitable for project work.

Note: Not suitable for use with nickel cadmium cells or for industrial applications

5 Per Pack - Can Style	Order Code	Price Per Pack
AA	118-311301	6.08
AA	118-311501	6.51
AA	118-311601	6.17
AA	118-311801	11.95
C	118-311901	5.60
C	118-312001	8.67
D	118-312101	8.67
D	118-312201	11.73

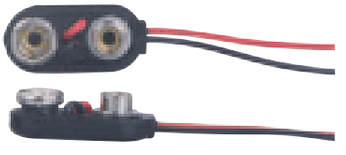
Premium Alkaline Batteries

DURACELL



Type	Pack Qty	Order Code	Price Per Pack
AAA Ultra	24	381-522501	24.96
AA Ultra	24	381-521301	27.57
C Ultra	12	381-523701	30.10
D Ultra	12	381-524901	39.92
9V Ultra	12	381-525001	44.12

Premium 9 Volt Battery Straps



Ideal for rugged applications, made of high impact molded plastic with integral wire lead strain relief

- Wire: #26 AWG, 7/34
- End Strip: 0.250 (6.4) Long, Tinned
- Base: 1.062 (27.0) × 0.512 (13.0) Polyethylene

Only **$1.56**

ORDER CODE 165-067501

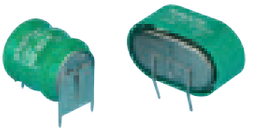
Energizer Industrial Alkaline

Energizer

Type	Pack Qty	Order Code	Price Per Pack
AAA	24	377-748001	26.01
AA	24	377-747901	24.17
C	12	377-749201	26.66
D	12	377-750901	35.05
PP3	12	377-751001	43.32

3.6V, 150mAh Rechargeable Ni-MH

VARTA



- Excellent overcharge capability
- Low self-discharge of 20% at RT after 1 year
- Flat and stable discharge voltage
- Long life - typical 500 full cycles
- Temperature range -20°C up to +65°C

(WxHxL) mm	Mftrs List No.	Order Code	Price Each
26.5 x 18.8 x 15	55615303059	187-936501	13.99
17.6 x 15.3 x 14.1	55615603940	279-35301	9.14
22.2 x 40.3 x 16	55615703012	305-594201	12.97

30% OFF

Special Cell

Comparable with MN21, V23GA, KE23A-1, LRV08 and K23A

Application range:

- Remote controls
- Car locking systems and other similar devices

30% OFF

Only **$6.67**

ORDER CODE 166-268101

Calculator Battery

RENATA BATTERIES

LR44

- Zinc / Manganese Dioxide
- Nominal Voltage 1.50 V
- Capacity 105 mAh, Discharge over 8.25 kΩ at 20°C to 0.9 V
- Internal Resistance Below 20 Ω at 20°C
- Operating Temperature 0°C - 60°C
- Self Discharge Less than 10% per year at 20°C

Only **$2.21**

ORDER CODE 419-864501

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 12 Date: 20-01-12 time: 11:01

Mini-Maglite®

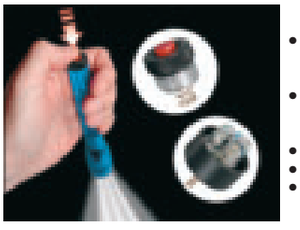
- Pocket torch with key-ring hole in tail cap
- Supplied in presentation case with 2 AA batteries

50% OFF

Only **$32.80**

ORDER CODE 316-137701

AA Maglite® LED Upgrade Kit



- Replaces conventional bulbs with the latest LED technology
- LED module extends battery life by up to 4 times
- Provides a brilliant white light
- 10 year LED life
- Available either on its own or with a handy push-button tail cap

40% OFF

NB. Torch not provided

Description	Order Code	Price Each
LED Module	109-770001	21.34
LED Module + Tail Cap	109-769901	29.08

'Hardcase' LED Torch

40% OFF

- Tough and durable body with shatterproof lens
- Will survive a 10m drop
- Bright white LED - 8,000 hours life
- Waterproof
- Requires 2 x AA batteries (not supplied)
- Supplied with a fabric belt pouch

Only **$23.30**

ORDER CODE 118-856401

AA Cell 3W LED Torches

- Balanced Optics™ provide a focusing, 3 watt LED, optimized to produce a powerful beam
- Supplied with belt holster and batteries

50% OFF

Description	Order Code	Price Each
Black	129-840401	50.80
Grey	129-840501	50.80

LED Torch with Ultraviolet

40% OFF

This compact and lightweight flashlight utilises the latest in UV technology. With a 1W powerful LED emitting an ultra violet beam.

- 2 x CR123A batteries (not included)
- Running time: 3.5 hours / 6 hours
- Wavelength: 390 - 395nm
- Tail cap tactical switch
- Head diameter: 33.5mm
- Weight: 144g (inc. batteries)

Only **$91.52**

ORDER CODE 182-395701

5" Lens Magnifying Lamp

- Slim head design for improved viewing area
- High quality 13cm lens for detailed work
- Supplied with tube, table clamp and lens cover
- Arm length: 98cm

Only **$140.83**

ORDER CODE 180-057201

3.5" LensTable Magnifying Lamp

- 12w Naturalight™ tube (energy saving)
- 9cm (3.5") diameter lens (1.75X) with inset lens (4X)
- Supplied with tube and lens cover
- Height: 35cm / 13.7"

30% OFF

Only **$65.79**

ORDER CODE 184-836401

6 LED Headlight

30% OFF

- Bright white and red LEDs - 8,000 hours life
- Four lighting options
- Swivel adjustment
- Weatherproof & Requires 3 x AAA batteries (included)

Only **$39.19**

ORDER CODE 118-856901

Tactical LED Flashlight

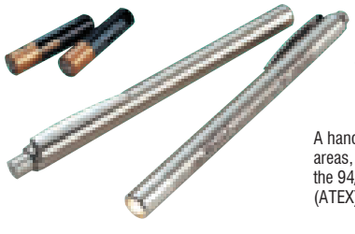
- 60 Lumens
- 1 x 1.5V AA size Duracell Alkaline battery (included)
- Battery life: up to 24hrs continuous
- Weight: 160g and Water resistant
- Visible from more than 3000m
- Nylon pouch and strap (included)

30% OFF

Only **$35.04**

ORDER CODE 182-433101

ATEX Safety Penlite



20% OFF Ex

A handy pen torch for use in hazardous areas, CE marked in compliance with the 94/9/EC Explosive Atmospheres (ATEX) directive.

- Convenient pen style allows single-handed operation
- Uses standard AAA batteries (not included)
- Positive feel click switch

Only **$70.97**

ORDER CODE 472-829401

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 13 Date: 20-01-12 time: 11:01

WD1000 80W Digital Station

Weller

For trade or industrial use only

WD1000 Digital soldering station includes:
- WD1 power unit
- WSP80 soldering iron
- WDH10 bench holder

Only
$585.15
ORDER CODE 117-853301

FX-888 Soldering Station

HAKKO

For trade and industrial use only

Includes:
- Station and Soldering iron handle
- T18-B tip
- Iron holder and cleaning sponge
- Lock Key
- On board tools

Only
$222.00
ORDER CODE 171-902101

WES51D & WESD51D Soldering Stations

Weller

For trade or industrial use only

WES51D/WESD51D Soldering Stations includes:
- PES51 iron
- PH50 iron stand with sponge
- ET series tip

		Order Code	Price Each
WES51D	Analogue	439-338701	219.85
WESD51D	Digital LED Temp Display	167-685501	292.10

WTCPTD Magnastat Controlled Soldering Station

Weller

For trade and industrial use only

WTCPTD station includes:
- TC201 iron
- TC202DT power supply
- PH1201 and PT series tip

20% OFF

Only
$280.54
ORDER CODE 317-694001

Hakko 701 Repair System

HAKKO

For trade and industrial use only

- Comes complete with 809 series desoldering gun and 907 Series soldering iron
- Features double cylinder vacuum pump
- Constructed of ESD safe material prevents damage to circuit boards

Only
$1,472.18
ORDER CODE 783-00601

474 Desoldering Station

HAKKO

For trade or industrial use only

- Comes complete with 809 series desoldering gun
- Features powerful pump-driven suction
- Constructed of static dissipative materials using an ESD design.

20% OFF

Only
$1,182.15
ORDER CODE 318-806101

FX950 Soldering Station

HAKKO

For trade and industrial use only

- Lead free soldering station, with analogue temperature indicator
- Utilising Hakko's composite tip technology
- Range of 84 different tip profiles
- Lock out key for 'Supervisor' control
- Featuring calibration/offset function

30% OFF

Only
$411.48
ORDER CODE 142-876401

FX951 Soldering Station

HAKKO

For trade or industrial use only

- Lead-free soldering utilising a 70W composite tip
- 84 different tip profiles available
- Vertical, small foot print ESD safe design
- Additional Nitrogen systems available for low flux soldering

Only
$576.58
ORDER CODE 967-793301

474-62 Desoldering Station

HAKKO

For trade and industrial use only

- Designed for use with Lead Free and conventional solder applications
- Reduction in pipe length increases heating capacity, reduces clogging of solder, makes cleaning easier
- Can be used on multi layer boards
- Very high suction power (15L per minute)
- New nozzle design assists removal of components in densely populated boards
- Includes 815 desoldering gun

Only
$1,274.08
ORDER CODE 822-246001

HAKKO FX300 Soldering Pot

HAKKO

For trade and industrial use only

- Lead-free solder compatible compact knob type soldering pot
- Provides quick start-up and easy pot replacement.
- Compatable with lead-free solder
- Maximum temperature 450°C
- Supplied with 50 x 50 mm solder pot (75 x 75 mm optional)
- Easy pot replacement

20% OFF

Only
$730.44
ORDER CODE 153-759501

C1311/1313 50W SMD Hot Tweezer Kit

HAKKO

For trade and industrial use only

- Suitable for Hakko 936, 937, 702, 702B and 928 stations
- Easily removes SMD chips and flat packs up to 2.5mm
- Kit comes complete with tweezers, stand and cleaning sponge (station picture not included)
- 200 - 400°C

20% OFF

Mftrs. List No.	Order Code	Price Each
C1311/1313	128-620001	357.11
A1388	340-991001	161.80
A1390	340-992201	161.80
A1391	340-993401	187.74
A1392	340-997101	187.74

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 14 Date: 20-01-12 time: 11:01

Gas Soldering Iron 'SuperPro'

portasol

Kit Contains:
- 1 iron
- 1 soldering tip
- 1 hot air tip
- 1 knife tip
- 1 sponge tray.

20% OFF

Only **$157.81**

ORDER CODE 493-71501

Note: For safety reasons the iron is supplied discharged of gas

Battery Soldering Iron Kit BP860EU

Weller

For hobbyist and semi-professional user

- 8/11W output
- Max temperature 450°C at 8W, 510°C at 11W
- Heat up time better than 15 seconds
- Red / green LED to show power level
- Off / high / low power selector switch
- White LED work light
- Safety cap with auto shut off feature
- Up-to 180 solder joints per 4 batteries

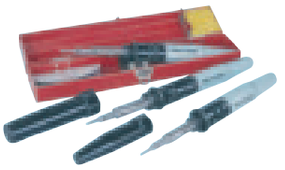
20% OFF

Only **$65.67**

ORDER CODE 148-954601

WSTA5 / WPA2 Pyropen Gas Soldering Iron

Weller



- Use of a blow nozzle for heat shrink tubing and soldering and desoldering SMD
- Reservoir in handle holds sufficient butane gas for up to 45 minutes soldering

Not supplied with gas

Mftrs. List No	Order Code	Price Each
WSTA5	**971-63701**	228.60
WPA2	**153-493701**	171.45

Desoldering Braid

AREXX

Ergonomic dispencer ensures there is less braid waste and the ABS holder and the metal tip of the dispenser are non magnetic and ESD free.

Description	Mftrs. List No.	Order Code	Price Each
Braid 2m x 1.7mm	AW-200	**166-155501**	9.79
Braid, 2m x 2.6mm	AW-100	**166-155401**	10.69

WSTA - 6 Self-igniting Junior Pyropen

Weller

Not supplied with gas

- Self-igniting butane gas operated soldering iron.
- The soldering tip can be replaced with a hot blow nozzle.
- Heat Temperature Range: +200°C to +500°C
- Operating Time Max: 1h
- Output Power: 60W
- Time to Operation: 30s

Only **$75.25**

ORDER CODE 559-79901

SOLDERING IRON - Marksman Series

Weller

- 12V dc 30W version supplied with crocodile clips
- Supplied with stand
- Tip temperature is 400°C

20% OFF

Voltage	Wattage	Mftrs. List No.	Order Code	Price Each
240VAC	25W	SP25D	**781-03401**	71.85
240VAC	40W	SP40D	**781-81201**	84.09
240VAC	80W	SP80D	**781-82401**	111.26
240V ac	120W	SP120D	**145-475801**	158.38
240V ac	175W	SP175D	**145-475901**	178.30
240V ac	250W	SP250D	**145-476001**	202.57

Gas Soldering Iron

SolderPro 180

irodo

- Max. power rating 185W electrical equivalent
- Three function tips change in seconds for soldering gun, torch or hot air blower
- Supplied with 2 x empty fuel cartridges (LEC-10) - Refill with any branded butane gas
- Brazing up to 2,450°F

20% OFF

Description	Order Code	Price Each
SolderPro 180	**129-678301**	55.46
SolderPro 180 Kit	**129-678501**	138.04

Rework Flux Gel

50% OFF

- Special flux gel designed for re-work of SMT assemblies
- Optimised for dispensing
- Halide-free, no-clean formulation, minimal clear residue
- Compatible with no-clean assembly and rework processes

Only **$20.47**

ORDER CODE 453-54701

Tip Cleaner

HAKKO

- No water required
- Will not reduce the tip temperature as conventional sponges do
- Cleans better than conventional sponges

Only **$21.15**

ORDER CODE 466-332901

Magna Lite Blow Torch

Weller

Applications include:
- heating shrink tubing
- fusing rope ends
- un-freezing locks
- camping
- first aid
- laboratory work & boating

Refillable with Weller BR200 butane order code 442-5820
(Not suitable for sale in New Zealand)

Only **$26.25**

ORDER CODE 145-351901

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 15 Date: 20-01-12 time: 13:21

Label Soldamop

'No-Clean' Green

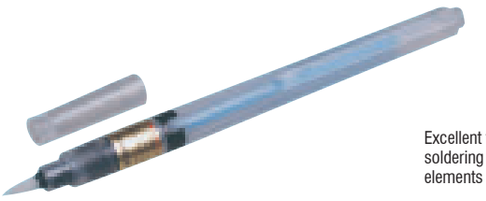
- Manufactured using high purity oxygen free and oil free fine gauge copper wire
- Impregnated with a special No-Clean flux
- Halide free and non-conductive

50% OFF

Width	Reel Length	Order Code	Price Each
0.8mm	1.5m	**475-432301**	5.20
1.5mm	1.5m	**475-433501**	6.17
1.5mm	10m	**475-434701**	22.62
2.5mm	1.5m	**475-436001**	6.09
2.5mm	10m	**475-437201**	26.66

Flux Pen

BONKOTE



Excellent for spot soldering of IC chip elements

- Refillable pen sized tool for applying liquids
- Sealed cartridge prevents evaporation
- Brush fibre tip for controlled application
- Ideal for applying flux but may be used in many applications

Only **$34.13**

ORDER CODE 500-89601

Tip Tinner and Activator

Weller® Tip Activator lead free 0051303199

30% OFF

- For regeneration of oxidized tips
- Works fast and easily with low temperature
- Environmentally safe, no halides, lead, rosin, or residue
- Regular use will prolong life time of the tip

Only **$20.96**

ORDER CODE 873-89501

Solder Pot Pellets

Formulated as an economic lead free alternative to traditional tin/lead solders for use in modern assembly, to give a balance of cost against performance. This alloy may not be suited to all mass production environments.

- High purity solder pellets
- 63/37 tin-lead eutectic alloy
- Ideal for solder pots or baths

30% OFF

Only **$28.87**

ORDER CODE 454-61801

Tip Tinner

20% OFF

- CT-TC-1 is an ammonia free, mild strength, general purpose tip tinner.
- CT-TC-2 is a high strength, aggressive tip tinner.
- Both tip tinners are RoHS compliant
- Can be used with leaded and lead free soldering.

Mftrs. List No.	Order Code	Price Each
CT-TC-1	**189-279101**	14.28
CT-TC-2	**189-279201**	14.28

Aqueous Defluxing Solution

A blend of biodegradable solvents, saponifiers and detergents in water, formulated to remove flux residues and greases

- Does not contain CFC's
- Lower toxicity than chlorinated solvents
- Works at ambient temperature

20% OFF

Only **$52.82**

ORDER CODE 182-778201

Desoldering Gun

DS 017/DS 017LS

30% OFF

- Heavy-duty spring loaded desoldering gun
- Push-button trigger
- Spare washer suitable for both versions

Standard	Order Code	Price Each
DS017 gun	**871-34501**	34.73
Spare nozzle	**871-59001**	17.13
Antitstatic		
DS017LS gun	**835-51101**	38.27

Solder Reel Stands

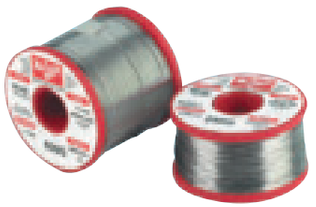
- 1 kg roll bobbin, maximum 2
- Outer dimensions: 87 (W) x 200 (H) x 141(D) mm
- Shaft diameter: 15mm
- ESD safe

Description	Order Code	Price Each
Single Solder Reel Stand	**466-330501**	28.88
Double Solder Reel Stand	**466-331701**	53.05

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 16 Date: 20-01-12 time: 11:01

60/40 Alloy, 362 Rosin Flux



10% OFF

- Contains five cores of mildly activated, non-corrosive "362" rosin based flux
- Amber coloured (rosin) residues do not require cleaning
- 60% Tin (Sn), 40% Lead (Pb) Alloy
- For all general purpose electronic assembly and re-work applications

500gm Reels (mm)	Length (m)	Mftrs. List No.	Order Code	Price Each
2.03	20	D4014	**419-41201▲**	26.30
1.63	32	D4016	**419-42401▲**	28.69

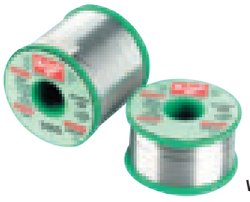
Therma-Boost Heat Tool

For hobbyist and semi-professional users

- Rating 30 watt standard / 130 watt boost
- Supply voltage 230 V / 50 Hz
- Maximum temperature 510 C
- Red and green LED indicators to show standard / boost mode
- Duty cycle in boost mode 8 seconds

Mftrs. List No.	Description	Order Code	Price Each
TB100AU	Therma-Boost	**149-824401**	73.65
TB5TKEU	5 Piece Tip Set	**148-954401**	40.54

Lead Free (99C) Alloy, X39 No-Clean Flux



- Low flux content (1% by weight) - low fuming and low spitting
- Complies with all lead-free legislative requirements

40% OFF

Weight	Wire Diameter	Order Code	Price Per Reel
250g Reels	0.5mm	**509-094501●**	27.82
	0.7mm	**509-095701●**	39.78
	0.9mm	**509-096901●**	38.19
500g Reels	0.7mm	**509-099401●**	41.61
	0.9mm	**509-100701●**	40.37
	1.2mm	**509-101901●**	38.96

Solder Pastes

50% OFF

- Excellent tack life
- High activity to deal with poor component solderablity
- Produces safe residues - eliminates the need for cleaning
- 25g cartridge or 25g syringe (with plunger) options

Only **$20.83**

ORDER CODE **149-96801▲**

WP60K Gas Soldering Iron kit

Includes:WP60 Gas soldering iron, 0.5mm soldering tip, hot blow nozzle, hot knife tip and protective cap

Includes:WP60 Gas soldering iron, 0.5mm soldering tip, hot blow nozzle, hot knife tip and protective cap

- 500°C when used as a soldering iron
- 650°C when used as a hot air blower
- 1300°C when used as a blow torch

50% OFF

Description	Mftrs. List No.	Order Code	Price Each
WP60K Kit	0051608799	**476-952101**	157.71
Tips			
1.0mm Tapered	0051644399	**412-231801**	21.26
2.4mm Chisel	0051644499	**412-232001**	20.69

No Clean Solder Paste

SN62, SN63 and SAC305
- Broad printing process window
- Clear pin-probe testable residue
- Low-Tombstoning
- 24 hour stencil life
- No head-in-pillow

SAC305
- Lead free
- Vapor phase compatible
- General metal load 88.5%

Type	Container	Mftrs. List No.	Order Code	Price Each
SN62	30g	62NC254S10-PT	**182-777201▲**	31.75
SN62	250g	62NC257-2-J250	**182-745801▲**	113.03
SN62	500g	62NC257-2-J5	**182-745401▲**	189.23
SN63	250g	63NC257-2-J250	**182-745701▲**	100.33
SN63	500g	63NC257-2-J5	**182-745301▲**	176.53
SAC305	500g	SAC305NC257S10-PT	**182-777301●**	40.64
SAC305	500g	SAC305NC257-2-J250	**182-745901●**	120.65
SAC305	250g	SAC305NC257-2-J5	**182-745601●**	201.93

Standard Case Kit

Contents:
- Screwdrivers
- Cutting/Drilling - Light duty cutters, wire strippers, junior hacksaw
- Grippers/Spanners/Wrenches
- Measuring/Marking - 150mm steel rule metric/imperial divisions
- Soldering iron, dispenser and desoldering gun

20% OFF

Note: Soldering iron is NOT supplied with gas

Description	Order Code	Price Each
Tool kit complete with case	**281-82701**	492.03
Tool Case Only	**440-09701**	244.16

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

PERFORMANCE MEETS VALUE

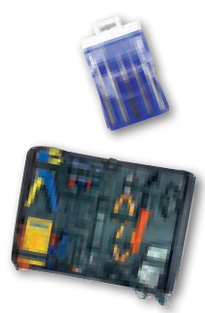
DISCOVER VALUE BRANDS FROM element14

Value Brands you can trust, quality you can count on at affordable prices!

Our value brands portfolio of products is one of many examples of how element14 continually strives to meet your price and performance needs. Multicomp, Pro-Power, Duratool and Tenma offer reliable products at low prices on thousands of in-stock products. When you need electronics, electrical and maintenance for the board, tool belt, box or bench, you'll find affordable options for a wide range of applications within the Value Brands from element14.

Warranty and return policy terms:

- 14 days exchange policy
- 12 months warranty



DURATOOL | multicomp | pro-POWER | TENMA

http://au.element14.com | 1300 361 005
http://nz.element14.com | 0800 90 80 80

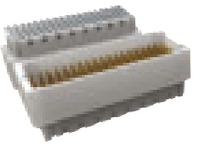
P 18 Date: 20-01-12 time: 11:01

RP3SL Series - 12A, Special Load

- High inrush capability, 120A for 20ms
- Standard 5mm pinning
- Rated carry current of 12A@250Vac
- Protection category II to **VDE 0631** and **VDE 0700**
- Ideal for switching incandescent and fluorescent lamps and highly inductive/ capacitive loads
- **UL** Recognised, **VDE** approved

Order Code	Mftrs. List No.	Price Each
117-505401	RP3SL012	15.12

Mezalok Stacking Connectors

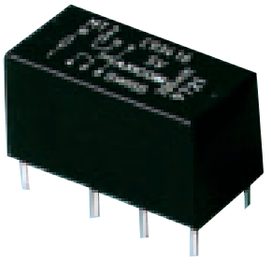


- Mounting type: Surface mount
- Pitch: 1.27 mm
- Contact material: Beryllium Copper
- Contact plating: Gold

20% OFF

No. of Ways	Stack Height	Mftrs. List No.	Order Code	Price Each
Header				
60		2102079-1	**187-763801**	45.37
114		2102060-1	**187-763401**	71.68
Receptacle				
60	10 mm	2102080-1	**187-763901**	60.98
114	12 mm	2102061-3	**187-763601**	96.76
114	18 mm	2102061-9	**187-763701**	119.19

MT2 Series, non-latching

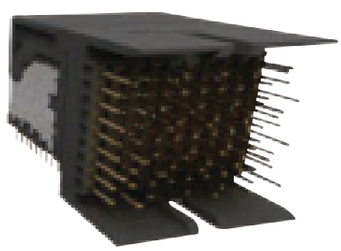


Contact arrangement	DPDT - 2 Form C
Switching voltage max.	220VDC / 250VAC
VSWR @ 900 MHz	1.31
Continuous contact current	2A @ max. ambient temp.
Switching capacity	2A
Contact Material	Silver- Nickel, Gold Covered
Coil consumption	150 / 200 / 400 / 550mW
Operate/Release	4 / 1ms typical
Temperature range	-55 to 85°C

- 2 pole telecom/signal relay
- THT type
- Non-polarized, non-latching coil
- Bifurcated contacts
- Immersion cleanable

COIL Volts	Ω	Order Code	Price Each
High sensitive version (150 mW)			
5V	168	**991-364501**	2.59
12V dc	968	**991-365301**	2.59
24V dc	3.872	**991-366101**	3.65
Sensitive version (200 mW)			
5V	125	**991-367001**	3.65
12V dc	720	**991-368801**	3.65
24V dc	2.88	**991-369601**	3.65
Standard version (400 mW)			
5V	63	**991-370001**	3.65
12V dc	360	**991-371801**	3.65
24V dc	1.44	**991-372601**	2.59
Standard version (550 mW)			
12V	280	**991-374201**	2.97

Fortis Zd Backplane Connector Module

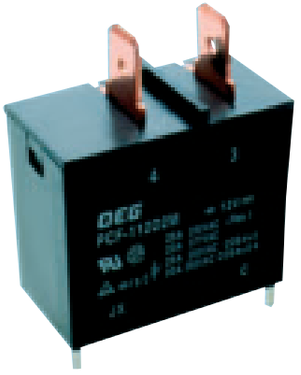


- Housing material: Black
- Shield material: Copper Alloy
- Shell material: Aluminium
- Contact material: Copper Alloy
- Contact plating: Gold
- Durability: 500 Cycles

20% OFF

No. of Ways	Module Type	Mftrs. List No.	Order Code	Price Each
Header - Right Angle				
90	Left	2000890-1	**187-764201**	194.37
90	Centre	2000891-1	**187-764301**	180.47
180	Centre	2000903-1	**187-764401**	360.93
90	Right	2000892-1	**187-764501**	194.37
90	Full	2102155-1	**187-764601**	204.53
180	Full	2102159-1	**187-764701**	409.03
Receptacle				
90	End	2000895-1	**187-764801**	160.10
90	Centre	2000896-1	**187-764901**	149.92
180	Centre	2000905-1	**187-765001**	296.17
90	Full	2102157-1	**187-765101**	170.27
180	Full	2102161-1	**187-765201**	335.93
Guides				
Guide Pin		2000676-2	**187-765401**	185.12
Right Angle Guide Module		2000713-1	**187-765501**	555.27
Guide Module Housing		2-2000677-0	**187-765601**	323.92

Quick connect - PCF Series

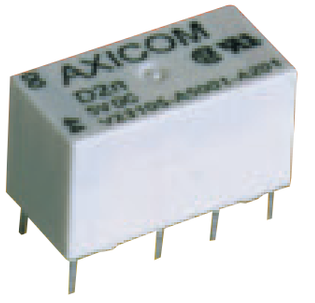


- Compact size
- High surge voltage
- Sensitive coil
- **CSA** and **TUV** Approved, **UL** Recognised

Contact arrangement	SPNO
Contact current rating	25A @ 250V ac resistive
Contact current rating	20A @ 250V ac inductive
Power - Coil	900mW
Surge between coil and contacts	10,000V
Dielectric voltage between coil and contacts	5,000V
Contact material	Silver Tin Oxide

COIL Voltage Ω	Mftr. List No.	Order Code	Price Each
12V160	PCF-112D2M	**965-944701**	9.51
24V640	PCF-124D2M	**965-945501**	7.90

High Sensitivity - D2n Series



20% OFF

- Fully sealed
- **UL** Recognised and **CSA** approved

COIL Volts Ω	Mftrs. List No.	Order Code	Price Each
DPCO - V23105-3 Series - 200mW			
12 - 720	V23105-A5303-A201	**117-498401**	4.06
24 - 2.88	V23105-A5305-A201	**117-498501**	4.44
DPCO - V23105-3 Series - 400mW			
5 - 62	1393793-6	**421-958201**	4.16

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

TE Connectivity is a global, $14 billion company that designs and manufactures over 500,000 products that connect and protect the flow of power and data inside the products that touch every aspect of our lives. Our nearly 100,000 employees partner with customers in virtually every industry—from consumer electronics, energy and healthcare, to automotive, aerospace and communication networks—enabling smarter, faster, better technologies to connect products to possibilities.

TE Relay Products offers an extremely broad range of relays for application in many different markets. Appliance, Alternative Energy, Automotive, Alternative Power Vehicle, Communication, Building Equipment, Industrial and Power Metering are some of the key industries served.

More information can be found at www.te.com or contact TE Australia office at +61 2 9554 2600

TE Relay Products
www.te.com • relays.te.com

TE connectivity RELAY PRODUCTS

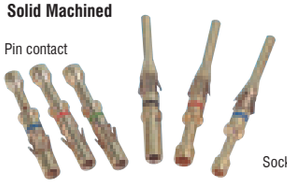
TE Connectivity's only obligations are those stated in TE's General Terms and Conditions of Business (http://www.te.com/aboutus/tandc.asp) TE expressly disclaims any implied warranty regarding the information contained herein, including, but not limited to, the implied warranties of merchantability or fitness for a particular purpose. TE Connectivity and TE connectivity (logo) are trademarks.

P 20 Date: 20-01-12 time: 11:01

Trident Connector Crimp Contacts

Solid Machined

ITT



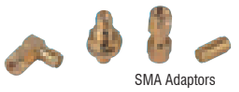
Current rating	13A
Contact resistance	5mΩ
Body material	Brass
Mating cycles	500

Wire Size	Colour	Order Code	Price Each
Pins			
24AWG	Blue	**118-676901**	2.29
20AWG	Green	**118-677101**	1.93
AWG16	Black	**118-677301**	1.87
Sockets			
16AWG	Black	**118-677801**	1.90

SMA Plugs, Jacks and Adaptors

50Ω

multicomp



Impedance	50Ω
Frequency Range	0 to 18.0GHz Semi Rigid 0 to 12.4GHz Flexible Cable
Contact Res - Centre	3mΩ
Contact Res - Outer	2mΩ
Ins Resistance	5000MΩ min
Temp Range	-65°C to +165°C

30% OFF

	Cable	Order Code	Price Each
Straight Plugs			
Crimp	RG58	**116-961601**	10.07
RA Plugs			
Crimp	RG58	**116-962701**	16.08

PCB Mount Jacks	Order Code	Price Each
Through Hole PCB Mount		
Straight	**116-963101**	14.17
RA	**116-963201**	18.14
Adaptors	**Order Code**	**Price Each**
SMA Plug - SMA Plug	**116-963801**	14.20
RA SMA Plug - SMA Jack	**116-963601**	20.36
SMA BH Jack - SMA Jack	**116-963701**	19.61

Ethernet Buccaneer® Panel Mount Connector

PX0833

BULGIN

- Cat 5e shielded coupler
- Mates with PX0836,PX0837,PX0838 and PX0834 dlex connectors
- Standard patchcord can be plugged into rear
- Single hole fixing
- Complete with panel sealing gasket

40% OFF

Only **$40.01**

ORDER CODE **966-772501**

Ethernet Buccaneer® Re-wireable Flex Cable Connector

PX0834/B

BULGIN

- Re-wireable flex cable connector
- Supplied with shielded RJ45 plug
- Mates with panel mounting connector,PX0833
- Suitable for use with cables from 3.5mm to 8mm diameter

30% OFF

Only **$21.80**

ORDER CODE **966-773301**

Ethernet Buccaneer® Panel Mounting Connector

PX0839/IDC Termination

BULGIN

- Cat 5e shielded RJ45 interface
- Rear panel mounting
- Mates with panel mounting connector (PX0833, PX0839, PC & PX0839/IDC)
- IDC block for discrete termination
- Complete with panel sealing gasket

30% OFF

Only **$36.80**

ORDER CODE **116-668001**

Ethernet Buccaneer® IP68 Panel Mounting Connector

PX0833/E

BULGIN

- Cat 5e shielded coupler
- Standard patchcord can be plugged into rear
- Earth wire
- Single hole fixing
- Complete with panel sealing gasket
- Mates with PX0836, PX0837, PX0838 and PX0834 flex connectors

40% OFF

Only **$52.15**

ORDER CODE **165-441501**

Photovoltaic Connectors

Helios H4

Amphenol

- Lower contact resistance
- Current rating - 45A (4mm²) / 52A (6mm²) / 60A (10mm²)
- NEC 2008, 690.33 compliant
- IP68 rated, compared to IP67 market standard
- High sealing range for the strain relief, covering all contact sizes
- Fully intermateable with industry standard

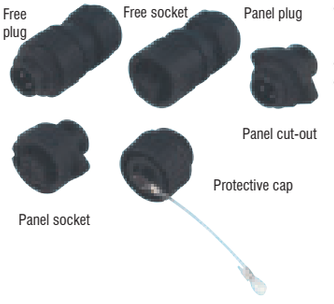
40% OFF

Cable Size	Mftrs. List No.	Order Code	Price Each
Socket			
6mm²	H4CFC6DI	**184-570001**	3.77
6mm²	H4CMC6DI	**184-570301**	2.57

Connectors for mains connection

CA-series

HIRSCHMANN



- Plastic screwlocking, suitable for process control and industrial application
- Sealed to **IP67**
- Approvals, **DIN, VDE, SEV** and **UL** Recognised

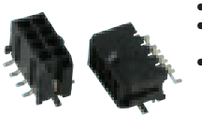
30% OFF

	Mftrs. List No.	Order Code	Price Each
Free Plug			
3 +Earth	CA3LS	**361-185101**	18.29
6 +Earth	CA6LS	**361-189901**	17.04
Free Socket			
3 +Earth	CA3LD	**361-186301**	20.33
6 +Earth	CA6LD	**361-190501**	24.96
Panel Plug			
3 +Earth	CA3GS	**494-66501**	11.81
6 +Earth	CA6GS	**494-67701**	11.28
Panel Socket			
3 +Earth	CA3GD	**494-68901**	12.73
6 +Earth	CA6GD	**494-69001**	18.76
Protective Cap			
Cover for panel plug	CA00SD2	**494-70701**	12.63
Cover for panel socket	CA00SD4	**494-71901**	12.63

Micro-Fit 3.0™ Wire-to-Board Headers

3.0mm Pitch

molex



- Solder tabs provide retention to PCB
- Locking ramp for secure mating retention to a dual row receptacle
- Fully isolated terminals
- Polarized to receptacle to prevent mismating

30% OFF

SMD

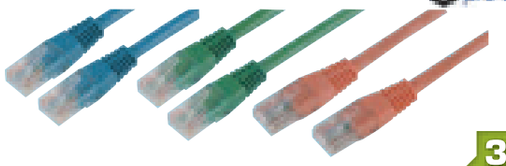
No. of Ways	Order Code	Price Each
Header - 90°		
2	**996-153401**	2.13
4	**996-154201**	2.11
8	**996-156901**	3.50
10	**996-157701**	3.55

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 21 Date: 20-01-12 time: 11:01

CAT 5E RJ45 Low Profile Patch Cables

pro-SIGNAL



30% OFF

- RJ45 to RJ45 UTP, Category 5E patch cables
- Low-profile moulded strain reliefs

Colour	Cable Length	Order Code	Price Each
Blue	2m	173-487101	3.22
Blue	5m	173-487401	5.54
Green	2m	173-488401	2.67
Grey	2m	173-489601	2.04
Black	0.5m	173-494201	1.49

Weather Resistant Cable Ties

pro-POWER

20% OFF

Manufactured from Nylon 6/6, with added Carbonate A the ties have excellent resistance to Ultra Violet light. Supplied in packs of 100.

Only **$1.91**

ORDER CODE 136-699901

Automotive Wire

pro-POWER

30% OFF

- Test Voltage: 1.5kV for 2 minutes
- PVC Insulation Thickness: 0.6mm
- Temperature Rating: 70°C

Only **$68.23**

ORDER CODE 120-275601

8451 - Brilliance™ Miniature Shielded Twisted Pair

BELDEN

Black and Red polypropylene insulated twisted pair of 22AWG (7/30AWG) tinned stranded copper conductors. Shielded in Beldfoil® aluminium/polyester foil with integral drain wire. Paper wrapped and sheathed overall in Black PVC.

40% OFF

Belden No.	Reel Length	Order Code	Price Per Reel
8451	U-30.5m	118-211801	71.67
	U-152m	118-210101	243.76
	U-304m	118-210201	427.43

USB3.0 Cable Assemblies

pro-SIGNAL

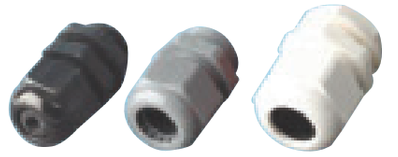
- Choice of Type A-B or A-A USB3.0 cable assemblies
- Maximum transfer rate up to 5.0 Gbit/s

40% OFF

Cable Length	Mftrs. List No.	Order Code	Price Each
Type A-B			
1.8m	11.99.8870	177-615301	18.19
3m	11.99.8871	177-615401	22.47
Type A-A			
1.8m	11.99.8795	177-615501	16.32
3m	11.99.8976	177-615601	21.88

Nylon Metric (Anti-Vibration) Cable Glands & Locknuts

TE connectivity



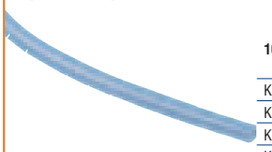
30% OFF

Designed with anti-vibration top caps. This assists in areas where vibration could be a problem.

	Order Code	Size	Price Each
Black			
	117-460101	M12	1.48
	117-460201	M16	1.51
	117-460301	M20	1.72
	117-460401	M20 +	2.01
	117-460601	M25	2.84
White			
	117-461401	M16	1.51
	117-461501	M20	1.64

Spiral Wrap

pro-POWER



50% OFF

10m Coil	Bore Dia. (mm)	Order Code	Price Per Coil
KS6N	3.2	141-608201	5.47
KS10N	7.5	141-608301	10.18
KS15N	12	141-608401	13.92
KS19N	15	141-608501	19.42
KS24N	20	141-608601	24.28
KSR6BK	3.2	141-608701	5.47
KSR10BK	7.5	141-608801	10.18
KSR15BK	12	141-608901	13.92
KSR19BK	15	141-609001	9.52
KSR24BK	20	141-609201	22.69

USB Cable Assemblies

molex

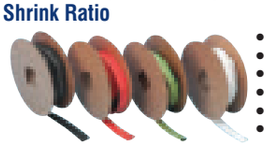
30% OFF

- High quality cable assemblies
- Various cable lengths available

Mftrs. List No.	Order Code	Price Each
USB 'A-B' cable, 0.83 m	120-189601	2.96
USB 'A-B' cable, 1.30 m	120-189701	4.14
USB 'A-B' cable, 3.30 m	120-189801	13.11

General Purpose Mini-Spools-3:1 Shrink Ratio

pro-POWER



- Flexible coloured polyolefin tubing
- Good chemical and solvent resistance
- Excellent physical and electrical properties
- 3:1 shrink ratio
- Flame retardant
- Minimum shrink temperature 80°C
- Operating temperature -40°C to +135°C

30% OFF

Mini-Spools Dia. Nom.	Shrunk	Spool Length (m)	Order Code	Price Per Spool
Black				
3	1	10	121-046701	21.52
6	2	7	121-046801	21.32
9	3	5	121-046901	21.32
12	4	4	121-047001	21.32
18	6	3	121-047101	20.90

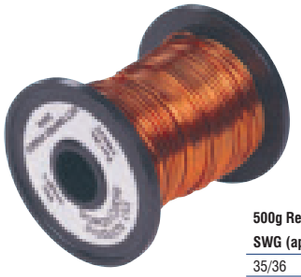
RoHS Compliant Non-compliant

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 22 Date: 20-01-12 time: 11:01

Enamelled Copper Wire

pro-POWER



Coated in self-fluxing polyurethane, conforming to **BS4520 Grade 2**

30% OFF

500g Reels

SWG (approx.)	Order Code	Price Per Reel
35/36	123-097401	37.15
34/35	123-097501	36.31
30	123-097701	34.88
25	123-098101	33.81
24	123-098201	30.94
22	123-098301	32.64
21	123-098401	32.11
19	123-098501	32.02
18	123-098601	31.81
16/17	123-098701	20.86

Warning: During the soldering process the polyurethane coating can produce small amounts of (T.D.I) toluene di-iso-cyanate. Fume extraction may be required to ensure permitted safety levels are not exceeded, ie 0.02 p.p.m.

Technician's Tool Case Plus

MAGMA

MA2632

- 50 Pockets and holders
- 100 % waterproof and crackproof rubberised base
- Padded handle and shoulder strap
- Padded central compartment fits laptop
- Internal document pocket
- Dimensions 460x210x420 mm (w x d x h)

20% OFF

Only **$127.00**

ORDER CODE 188-556701

Technician's Tool Rucksack

MAGMA

- Mobile phone pocket
- Internal and external document pockets
- 31 pockets and holders
- Dimensions 380x250x420 mm (w x d x h)

20% OFF

Only **$105.41**

ORDER CODE 188-556601

CK MAGMA- MA2628 - Maxi Bag

MAGMA

MA2628

- 100 % waterproof and crackproof base
- Padded handle and shoulder strap
- Long handles so can be carried open
- Internal storage area with 12 additional pockets and holders
- Dimensions 580x270x270mm (w x d x h)

30% OFF

Only **$105.41**

ORDER CODE 188-556401

Technician's Vest

MAGMA

- 14 pockets and holders for tools, equipment and mobile phone
- fully adjustable
- mesh lining for comfort and breathability
- reflective strip for visibility on site

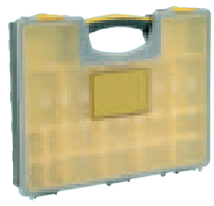
30% OFF

Only **$69.30**

ORDER CODE 188-558101

22 Compartment Box

DURATOOL



- 22 compartments
- Hinged lids
- Double locking lid
- Removable compartment tray
- Dimensions: (wxhxd) 420mm x 335mm x 62mm

20% OFF

Only **$20.82**

ORDER CODE 144-738101

Plano Hardbottom Toolbag

PLANO

- Tool bag manufactured from special reinforced material
- Hard PVC bottom
- 23 storage pockets, 17 inside, 6 outside
- Ideal for power tool accessories and small tools

30% OFF

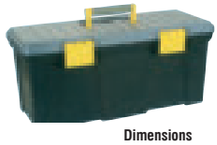
Size 177.8(w) X 330(L) X 254(H) mm
Weight 1.6kg

Only **$31.52**

ORDER CODE 723-318801

Tool Boxes

DURATOOL



- Robust plastic construction
- Padlock lugs
- Soft grip handle
- Internal tote tray

30% OFF

Dimensions	Order Code	Price Each
395 x 223 x 395mm	144-737201	12.55
500 x 250 x 500mm	144-737401	14.17
560 x 260 x 560mm	144-737501	12.38

3 Pocket Pack

MAGMA

- holds small loose items
- can be clipped onto belt and bag
- dimensions per pocket, empty: Large:218x170x10 mm (w x d x h) Medium:178x150x10 mm (w x d x h) Small:145x120x10 mm (w x d x h)

30% OFF

Only **$17.68**

ORDER CODE 188-557901

Essential Tool Pouch

MAGMA

- mini pouch for essential tools
- metal clip for strength and easy access / removal
- 4 pockets & holders for tools & equipment
- dimensions: 90x100x200 mm (w x d x h)

30% OFF

Only **$23.42**

ORDER CODE 188-557801

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 23 Date: 20-01-12 time: 11:02

Universal Key

KNIPEX

- 9 different die-cast zinc key-profiles in 1 tool
- With detachable chain and snap hook
- Total length: 90 mm

30% OFF

Only **$61.21**

ORDER CODE 177-981001

Heat Shrink Guns - Portable

Butane Gas Powered

irodo

30% OFF

- Flameless heat of up to 750°C
- Piezo electronic automatic ignition system
- Operates for 120 minutes with 20ml gas (gas not included)
- Deflector attachment and stand included
- Spare orifice assembly provided

Only **$31.75**

ORDER CODE 353-399201

Miniature Hooked Test Probe

DILTRON

20% OFF

A plunger action miniature hooked test probe with gold plated contacts, solder connections. Working voltage 50V ac.

Colour	Order Code	Price Each
Red	119-380201	2.48
Black	119-380501	2.48
Blue	119-380701	2.48
Green	119-380801	2.48
Yellow	119-380901	2.48

SharpShooter® Heavy Duty Staple Gun

STANLEY

- Easy-squeeze handle reduces hand fatigue
- Hi/Lo power lever for hard and soft materials
- Anti-jam mechanism saves time on the job
- Delivers high power and deep penetration

20% OFF

Driver	Mftrs.List No.	Order Code	Price Each
Staple Gun	TR150HL	171-876701	45.95
Pack of 1000			**Price**
6mm	TRA704T	171-876801	6.74
8mm	TRA705T	171-877101	7.09
10mm	TRA706T	171-877201	7.77
12mm	TRA708T	171-877301	7.38
14mm	TRA709T	171-877401	8.48

RE111 Engraver Easy Etch

ARLEC

- Easy Etch Engraver engraves any surface
- Steel bit included
- Supply Voltage V AC: 240V
- Tip Material: Steel

Only **$58.85**

ORDER CODE 782-39701

G Clamps

DURATOOL

- All metal construction
- G clamp with fine thread
- Matt black finish
- G CLAMP, 6"
- Throat Capacity: 6"
- Clamp Material: Steel
- Jaw Opening Max: 150mm
- Vice Jaw Opening Max: 6"

Only **$13.97**

ORDER CODE 144-740101

PCB Cleaner

Abrasive Rubber

KELAN

- Eraser block for cleaning and degreasing copper-clad boards
- Abrasive rubber block cleans and polishes
- Block Material: Rubber
- SVHC: No SVHC (20-Jun-2011)

30% OFF

Only **$9.89**

ORDER CODE 141-33001

Thickness Gauge

Mitutoyo

- Compact pocket sized Digimatic thickness gauge
- Inch/metric conversion
- Measuring faces are hardened, ground and lapped
- Ideal for measuring paper, leather, plastic, sheet metal and film

20% OFF

Only **$154.83**

Resolution	Measuring Range	Accuracy	Mftrs List No.
0.01mm 0.00005"	0-12mm 0-05"	±0.02mm ±0.001mm	700-118

ORDER CODE 321-634201

Hand Rivet Gun

DURATOOL

anf 20 x 4.8 x 8mm

A heavy duty hand riveter supplied complete with a selection of rivets to fit the four interchangeable tips.

- Length 240mm
- Four different sizes:

20 x 2.4 x 6mm, 20 x 3.2 x 6mm, 20 x 4 x 6mm

20% OFF

Only **$10.64**

ORDER CODE 171-214601

Glass Fibre Pencil & Refill 2mm

DURATOOL

Propelling pencil action exposes more or less of the glass fibres. The shorter fibres showing, the more abrasive the action. Glass fibre refills for use with the 2mm Pencil, Supplied in packs of 5.

30% OFF

Mftrs.List No.	Order Code	Price Each
BU2137	182-641801	21.34
		Price/Pack
PBU2138/5	182-641901	13.45

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 24 Date: 20-01-12 time: 11:02

Junior Hacksaw

DRAPER TOOLS

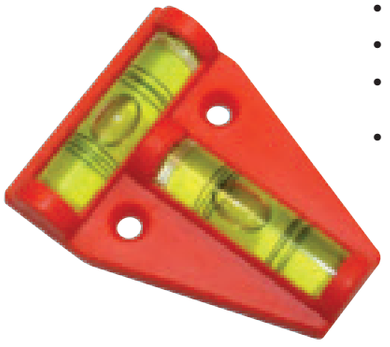
- Inexpensive, neat and efficient saws
- Saw Type: Hack
- Tool Body Material: Steel
- Length: 150mm

Only **$4.13**

ORDER CODE 442-64101

Cross Check Spirit Level

DURATOOL



- Levels any surface in 2 directions
- Dimensions: 44mm x 60mm x 13.5mm
- 2 Screw holes for mounting 4mm dia. x 25mm centres
- Accuracy 3mm per metre

Only **$8.13**

ORDER CODE 176-264201

Micro-Therm Gas Torch

irodo

- HEAT GUN, GAS, 650C, MICRO-THERM
- External Depth: 25mm
- Height: 115mm
- Weight: 95g
- Width: 80mm

Only **$35.72**

ORDER CODE 129-682701

Cable Cutter

Eval

40% OFF

- For multicore cables with diameter up to 10 mm
- Stainless steel blades
- On carded hang pack
- Overall Length:160mm
- Weight:115g

Only **$34.37**

ORDER CODE 758-792901

Mini Cutter

DURATOOL

20% OFF

- Mini cutter for precision work
- Drop forged
- Double-dipped handles for added comfort
- Jaw Capacity: 25mm
- Length: 120mm

Only **$4.05**

ORDER CODE 132-871501

Vinyl Pipe Cutter

DURATOOL

- These strong pipe cutters have a razor sharp, stainless steel blade which gives effort-less straight cuts.
- Hardened steel blade will cut pipe and conduit up to 42mm

20% OFF

Only **$11.11**

ORDER CODE 144-742901

Diagonal cutters - 80 Series

LINDSTROM

- Check order codes online for product detail

40% OFF

Cut Type		Mftrs.List No.	Order Code	Price Each
Micro Semi Flush	Side	8130	**167-159701**	94.11
Flush	Side	8140	**440-17601**	87.25
Flush	Diagonal	8141	**135-620701**	77.34
Ultra Flush	Side	8142	**167-159801**	95.63
Micro Semi Flush	Side	8150	**440-19001**	84.58
Micro Semi Flush	Side	8160	**440-20601**	74.68

Diagonal Cutters, Supreme Series

LINDSTROM

Precision induction hardened edges 63-65 HRC. Handles in synthetic material and come with return spring.

40% OFF

Length 109 mm
Cutting Capacity 7190 0.2-1.0 mm, Micro Bevel
Cutting Capacity 7191 0.1-1.0 mm, Flush Cut
Length jaw: 9 mm

Cut Type	Cut Type	Mftrs. List No.	Order Code	Price Each
Semi Flush	Tapered Cutter	7190	**167-158901**	94.18
Full Flush	Tapered and Relieved Cutter	7191	**167-159001**	91.44

Compact Bolt Cutters Type 71

KNIPEX

40% OFF

- With precision cutting edges for soft, hard and piano wire
- Cuts material like bolts, nails, rivets, etc. up to 5.2 mm dia.
- Cutting edges additionally induction hardened, cutting edge hardness approx. 64 HRC

Mftrs. Part No.	Order Code	Price Each
71 01 200	**875-71501**	55.76
71 32 200	**171-500601**	64.41

99E Knife

STANLEY

Grey painted die cast body with variable blade extension and 5 assorted blades.

20% OFF

Only **$15.96**

ORDER CODE 135-368201

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 25 Date: 20-01-12 time: 11:02

35 Piece Hobby Knife Set

DURATOOL

- Ideal for the modeller or craft worker
- Tweezers for the safe removal of blades
- Supplied with: 23 assorted blades, 2 x handles, 1 x plane, sanding block, tweezers, 3 x scoring points and handle,
- Contained in a handy carry case

Only **$19.05**

ORDER CODE 132-872601

FatMax™ retractable Blade Knife

- Blade wiper removes excess dirt and protects knife
- Blade clamp eliminates blade wobble, gives more control
- Pop-up blade dispenser for easier access and faster changeover
- Supplied with FatMax™ blades
- Push button blade change- no tools needed

30% OFF

Only **$31.15**

ORDER CODE 171-878301

High Precision Scalpels and Blades

SWANN MORTON

The ACM Boxed Set is a comprehensive set of 13 precision ground carbon steel blades.

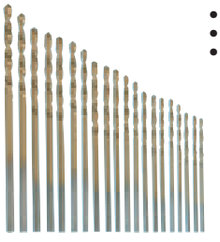
Handle 1 with blade 11: order code 155-1262

Handle 5 with blade 28: order code 155-1269

Description	Mftrs.List No.	Order Code	Price Each
ACM Set	9101	**155-127501**	93.69
Handle No. 1 with blade 11	9102	**155-126201**	15.96
Handle No. 5 with blade 28	9104	**155-126901**	21.54
			Price Per Pack
Blades for Handle No. 1			
High Precision Blades, Pack of 5	9303	**155-126501**	7.22
High Precision Blades, Pack of 5	9307	**155-126801**	7.22
			Price Per Pack
Blades for Handle No. 5			
High Precision Blades, Pack of 5	9318	**155-127101**	6.60

20 Piece Micro HSS Drill Bit Set

DURATOOL



- Titanium coated
- For use with a suitable power drill
- Sizes include: 0.3. 0.35. 0.4. 0.45. 0.5. 0.55. 0.6. 0.65. 0.7. 0.75. 0.8. 0.85. 0.9. 0.95. 1.0. 1.2. 1.3. 1.4. 1.5 and 1.6mm

20% OFF

Only **$10.07**

ORDER CODE 132-872001

HSS Jobber Drill Bit Sets

DURATOOL

- **19 Piece Metric:** 1 to 10mm in increments of 0.5mm
- Kit Contents: 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5,
- 10mm Drill Bits Type: Twist / Jobber
- Material: HSS (High Speed Steel)
- Range: 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 6.5, 7, 7.5, 8, 8.5, 9, 9.5, 10mm

Only **$36.08**

ORDER CODE 151-772501

BMP™71 Label Printer

BRADY

Kit Contents: BMP71 Printer with LabelMark Software, hard-case, softcase, AC adaptor, quick charger, battery, cleaning kit, TLS/Handimark media adaptor and USB cable

Only **$2,146.30**

ORDER CODE 182-752601

Portable Labelers

PL100 / PL200 / PL300

3M

A family of portable labelers to tackle any number of jobs from DIY to industrial jobsite applications.

Mftrs. List No.	Order Code	Price Each
PL100	**191-252701**	98.18
PL200	**191-252801**	267.19
PL200K	**191-252901**	407.60
PL300	**191-253001**	483.42
PL300K	**191-253101**	633.77

Universal Bench & Handheld Workholders

SHESTO

Universal Work Holder

- Comes with 8 steel pins which can be positioned as required around the head
- Also good for wire bending and forming
- 140mm long

30% OFF

Bench Universal Work holder

- The steel pins can be placed anywhere on the head to accommodate various shapes.
- Head can be removed from base and fitted to a bench vice

Mftrs. List No.	Order Code	Price Each
CL8010	**182-644601**	27.28
PCL8010/B	**182-644701**	39.36

Vacuum Swivel Vice

DRAPER

- Swivelling head allows many varied positions.
- V grooved jaws for holding cylindrical and irregular shapes.
- Supplied with removable soft rubber safety jaw covers.

30% OFF

Only **$83.88**

ORDER CODE 170-619201

Tools

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 26 Date: 20-01-12 time: 11:02

Pin Vice

DURATOOL

Pin Vice - Double Ended
- Handy holder for drills, taps, pins etc
- 2 reversible collets: 0-1.2mm, & 1.3-2.4mm + 0.802.0mm, & 1.8-2.9mm
- Anti-roll 6 sided body

Pin Vice Set - Double Ended Swivel Top
- Handy holder for drills, taps, pins etc
- 2 reversible collets 0-1.2mm, & 1.3-2.4mm
- Swivel head for comfort and efficiency of use
- Delivered with 5 drills

30% OFF

Type	Mftrs. List No.	Order Code	Price Each
Double ended	PV1061	**182-643501**	11.45
Drills	PV2237/D	**182-643601**	18.76

60mm Vacuum Base Vice

- Mounts on most flat surfaces
- Easy lock handle and tough nylon body
- Removable rubber jaw faces
- Ideal for DIY, hobbies, crafts and electronics applications

30% OFF

Technical Data	
Jaw Width	60mm
Head Tilt	180°
Head Swivel	360°
Height	200mm
Weight	900g

Only **$23.67**
ORDER CODE 171-212801

Maxsteel™ Multi-Angle Base Vice

STANLEY

- 3" jaw opening
- Removable rubber jaw covers
- C-clamp mount attaches to work surfaces up to 2 3/8" thick
- Clamping force of 25 Kg

Only **$46.14**
ORDER CODE 169-666801

Clamp Tool With Magnifier

DURATOOL

- Adjustable joints for movement in all directions
- Strong alligator clips hold work securely
- Heavy cast iron base for added stability
- Distortion free magnifying glass

20% OFF

Only **$10.24**
ORDER CODE 136-704901

Eye Magnifiers

EOIL

- Inspection eye magnifiers
- Lens holder is made from a semi-rigid plastic
- Lens is made from a high quality scratch resistant optical grade polymer
- x7 and x4 magnification but can be piggy-backed to give x28

50% OFF

	Mftrs. List No.	Order Code	Price Each
x 4	5404	**201-87001**	10.37
x 7	5408	**201-88101**	10.37

Inspection Mirror

DURATOOL

- Chrome finish telescopic shaft
- Non slip cushion grip handle
- Extends from 350mm (14") to 750mm (30")
- Mirror size: 50mm (2") x 100mm (4")

30% OFF

Only **$2.59**
ORDER CODE 144-756501

Illuminated Magnifier x 8 Magnification

SAAME

- High quality handheld magnifier offers low image distortion
- Lens type: Aspheric
- Lens magnification: 8X
- Lens diameter: 35mm

40% OFF

- Power supply: 2 x type C battery cells (not supplied)
- Illumination: 1 x 2.5V 250 mA bulb

Only **$58.80**
ORDER CODE 171-378901

USB Microscope

DURATOOL

Includes: Microscope, stand, software and user guide.
- Manual focus range from 5mm to 45mm
- 25X - 200X magnification
- 4x white LED provide illumination
- Software (supplied) shows live feed on computer
- Capture still images and video up to 1280x960 resolution

30% OFF

Only **$148.36**
ORDER CODE 182-238601

PLCC Extractor Tool

DURATOOL

- For removing PLCC type devices from their sockets
- Prevents damage to the IC packaging and socket
- Easy to use, simply squeeze the tool handle to extract
- Length: 98mm

30% OFF

Only **$10.46**
ORDER CODE 125-716901

VDE Plier Set

20% OFF

DURATOOL

Contents:
- 160mm Diagonal pliers
- 180mm Combination pliers
- 200mm Long nose pliers

VDE

Only **$112.51**
ORDER CODE 149-634001

Lindstrom 'Supreme' Snipe Nose Plier

LINDSTROM

Good performing cutters and pliers for general electronics work, repair and fine mechanical work.
- SVHC: No SVHC (20-Jun-2011)
- Jaw Length: 32mm
- Overall Length: 132mm

Only **$90.68**
ORDER CODE 167-159601

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 27 Date: 20-01-12 time: 11:02

Voltage Test Screwdriver

AC Voltage Test	
Contact	70 to 250V AC
Non-Contact	70 to 600V AC
DC Voltage Test	Up to 250V DC
Polarity Test	1.5V to 36V DC
Continuity Check	0 to 50MΩ
Microwave Leakage Detection	≥5mW/cm²

30% OFF

Only **$12.70**

ORDER CODE 428-433101

6 Piece Torx Jewellers Screwdriver Set

DURATOOL

A 6 piece precision screwdriver set containing a selection of screwdrivers. The set is supplied in a rigid, hinged case.
The set contains:
Torx: T5,T6,T7,T8,T9 and T10

20% OFF

Only **$6.35**

ORDER CODE 134-114101

Modular Ratchet Crimp Tool

DURATOOL

An 8 Contact (RJ45) modular ratchet crimp tool for crimping 8 way (8P8C) modular telephone plugs.

- Built in wire cutters
- Vinyl grip
- Locking mechanism

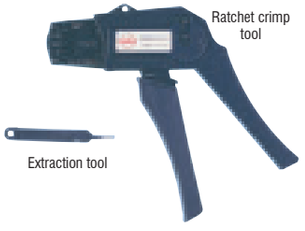
20% OFF

Only **$10.85**

ORDER CODE 144-742001

Tooling for Micro-Fit 3.0™

molex



- Full cycling parallel action ratchet crimp tool with manual release and contact retaining bar
- Supplied with full instructions

30% OFF

Only **$265.99**

ORDER CODE 160-263501

Tape Mesure, Micropowerlock 5M/16"

STANLEY

40% OFF

- Versatile wide blades
- Mylar™ polyester film extends life of entire blade
- High-impact, ABS case with rubber over mold withstand rugged conditions
- Riveted, corrosion-resistant hook moves to allow for accurate inside/outside measurements
- easy-to-read, high-contrast blade for all light conditions

Only **$23.35**

ORDER CODE 169-668401

Adjustable Wrenches

DURATOOL

- Adjustable wrenches with metric scale
- Drop forged, heat treated jaws
- Polished and chrome plated

30% OFF

Length	Jaw Size	Order Code	Price Each 1+
150mm	20mm	144-740401	3.19
250mm	30mm	144-740601	7.68
300mm	40mm	144-740701	9.10

3-Pin Mains Plug to IEC-C13

ACCESS

20% OFF

Length	Colour	Mftrs. List No.	Order Code	Price Each
1m	Black	K3748	417-890701	6.82
2m	Ash Grey	K3749	417-891901	10.08
2m	Black	K3750	417-892001	10.08
2m	Orange / Transparent	K3750ORA	121-979701	9.06
3m	Orange / Transparent	K3758ORA	938-245301	9.98
5m	Orange / Transparent	K37557ORA	938-246101	12.73

AT-700 Anti-Static Tweezer Set

AREXX

Set consists of seven different tweezers made of PBT material.

30% OFF

Only **$13.56**

ORDER CODE 128-009201

Tweezers

DURATOOL

Range of high quality, stainless steel tweezers, designed to meet the requirements of the electronics and precision engineering industries.

30% OFF

Description	Order Code	Price Each
Super fine straight tip, 110mm	312-757601	3.91
Fine curved tip, 110mm	312-758801	3.91
Fine straight tip, 140mm	312-759001	3.91
Universal, 140mm	312-760601	4.19
Reverse action, 160mm	312-761801	4.19
Cutting, 115mm	312-762001	4.35
Extra fine and sharp tip, 120mm	312-763101	3.91
Cross-leg soldering, 160mm	312-765501	3.91
Heavy duty, 160mm	312-766701	3.91
Point, 200mm	312-767901	3.91
Heavy-duty, 160mm	312-768001	4.90
Fine straight tip, 120mm	312-769201	3.91

26 Piece Mini Tool Kit

DURATOOL

- 9 x Bit assortment: PH1, PH2, PH3, slotted 5, 6 and 7mm, & torque 10, 15 and 20mm
- 1 x adaptor
- 1 x magnetic tip handle
- 1 x 5" mini long nose pliers
- 1 x 4.5" mini side cutters
- 1 x 115mm tweezers
- 4 x ¼" drive sockets: 5,6,8 and 10mm
- 1 x extension bar
- 6 x precision screwdrivers - 4 slotted and 2 phillips

Only **$11.43**

ORDER CODE 136-704401

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

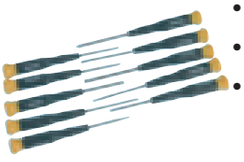
P 28 Date: 20-01-12 time: 11:02

Pocket Screwdriver, 4 in 1

- The convenience of a set of precision drivers in a one pocket tool
- Ideal for toy assembly, battery compartments, eye glasses, electronics and cell phones
- Non-slip textured surface has slip, crack and peel resistance
- Magnetic bits attract and hold small screws
- Soft and comfortable, bi-material grip
- Tip sizes: 5/32", 1/8", 1PT, 2PT

Only
$6.35
ORDER CODE 171-879201

15 Piece Precision Screwdriver Set



Set contents:
- Slotted - 2 x 65mm, 2.5 x 65mm, 3 x 65mm, 4 x 65mm
- Phillips - PH000 x 65mm, PH00 x 65mm, PH0 x 65mm, PH1 x 65mm
- Torx - T6 x 50mm, T7 x 50mm, T8 x 50mm, T9 x 50mm, T10 x 50mm, T15 x 50mm, T20 x 50mm

Supplied in a convenient plastic carry case

Only
$62.81
ORDER CODE 312-808801

10 Piece Screwdriver Set

Tri-lobar handle design increasing comfort and torque control. Nickel plated boron steel blade for strength and rust resistance. Heat treated tip prolongs screwdriver tip life.

Contents:
Philips : 0pt / 50mm, 1pt / 100mm, 2pt / 100mm, 2pt / 40mm
Slotted: 3.7 x 50mm, 5 x 75 mm, 5 x 150 mm, 6.5 x 100mm, 6.5 x 150mm, 6.5 x 40mm

30% OFF

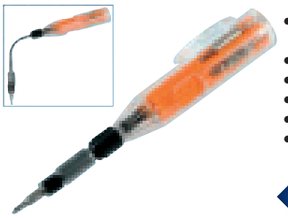
Only
$26.92
ORDER CODE 135-340701

Precision Screwdrivers

20% OFF

Type/Size	Order Code	Price Each
Slotted		
1.5 x 75mm	**144-759001**	1.90
2.0 x 75mm	**144-759101**	3.66
3.0 x 75mm	**144-759301**	3.92
4.0 x 75mm	**144-759401**	2.86
Phillips		
PH00	**144-759501**	2.61
PH0	**144-759601**	1.77
PH1	**144-759701**	2.61

6 Piece Flexi Precision Screwdriver

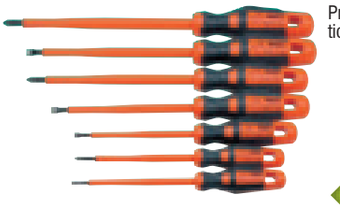


- Extendable from 120mm to 185mm, for hard to reach places
- 6 x double-ended screwdriver bits:
- - Slotted: 1.5, 2, 2.5mm
- - Phillips: PH000, 00, 0
- - Torx: T4, 6, 7, 8, 10, 15
- Length: 120mm

20% OFF

Only
$9.82
ORDER CODE 125-716801

VDE Screwdriver Set



Provides VDE insulation for work up to 1000 volts

30% OFF

Contents

Slotted	3 x 100	**Philips**	100 x No.0
	4 x 100		150 x No.1
	5.5 x 125		175 x No.2
	6.5 x 150		

Only
$109.18
ORDER CODE 326-313701

8 Piece VDE Insulated Screwdrivers Sets - 1000V

Dextro Series

20% OFF

Mftrs. List No.	Order Code	Price Each
T49192	**166-429001**	72.19
T49193	**166-429101**	74.83

Content 166-429001
2.5x75 mm
4.0x100 mm
5.5x125 mm
6.5x150 mm
PH 0x60 mm
PH 1x80 mm
PH 2x100 mm
Mainstester 3.0x65 mm

Content 166-4291
2.5x75 mm
4.0x100 mm
5.5x125 mm
6.5x150 mm
PZ 0x60 mm
PZ 1x80 mm
PZ 2x100
Mainstester 3.0x65 mm

Precision Screwdriver Sets

30% OFF

Set contents:

6 piece Slot/Phillips	PH.00, 0, Slot 1.5, 2, 2.5, 3 all 50mm long
7 piece Slot/Phillips/Torx	PH.00, 0, Slot 2, 2.5, 3, Torx TX15, T20 all 50mm long
7 piece Torx	TX6, TX7, TX8, TX9, TX10, TX15, TX20 all 50mm long

	Order Code	Price Each
6 piece Slot/Phillips	**312-693601**	14.44
7 piece Slot/Phillips/Torx	**312-694801**	18.62

Portable Vacuum Pick-Up Tool

30% OFF

Lightweight, portable and suitable for the picking and placing of small components weighing up to 50 grams.
- Supplied with 3 angled and 3 straight pick-up hands with a choice 4mm, 6mm or 10mm cap diameters

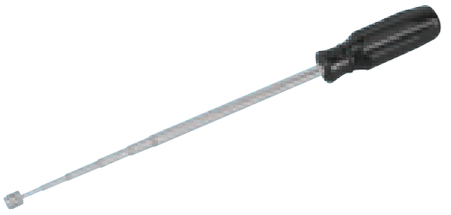
Only
$26.66
ORDER CODE 151-635001

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 29 Date: 20-01-12 time: 11:02

Magnetic Pick-up Tool

DURATOOL



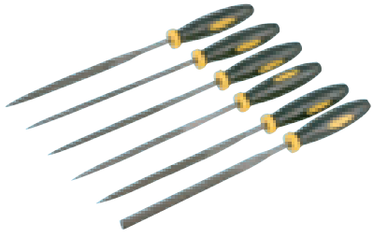
30% OFF

Features:
- A handy chrome plated telescopic magnetic retrieving tool.
- The ideal for hard to reach working.
- Extension length: 170 to 540mm.
- Magnetic tip on an extendable chrome-plated blade

Only **$11.65**
ORDER CODE 312-567101

6 Piece Needle File Set

DURATOOL



20% OFF

- 6 piece needle file kit with cushion grip
- Size: 3 x 140mm
- Contents: flat taper, half round, three square, square, round and flat parallel
- supplied in a plastic carry case

Only **$9.94**
ORDER CODE 144-743101

Wire Stripper Super No 5

DURATOOL

- Automatic wire stripper for all common stranded and solid conductors of 0.2 to 6.0 mm² (24-10 AWG).
- Adjustable length stop of 5 to 12 mm
- Easily accessible built-in side cutter for max 2mmØ

40% OFF

Only **$22.90**
ORDER CODE 169-672601

Precision Wire Strippers

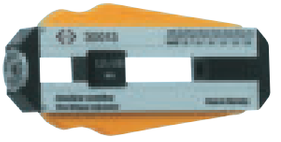
- Precision wire strippers - can also be used as pliers and shears
- Built-in closed stopper and constant force recovery spring

20% OFF

Description	Order Code	Price Each
8PK 20-30AWG	**312-545201**	15.39
8PK 10-20MM	**312-546401**	14.38

Precision Wire Strippers

DURATOOL



Order Code	Adjusts to:
141612301	mm 0.12 0.16 0.20 0.25 0.30 0.40
136451401	mm 0.25 0.30 0.40 0.50 0.60 0.80
146196701	mm 0.30 0.40 0.50 0.60 0.80 1.00

Mftrs. List No.	Order Code	Price Each
330009	**141-612301**	47.49
330013	**136-451401**	47.49
330011	**146-196701**	47.49

7" Automatic Wire Stripper

DURATOOL

- Parrot type
- For all types of wire from 0.2-6mm
- Strips lengths up to 25mm
- Self adjusting mechanism
- Also has a cable cutter

Only **$11.43**
ORDER CODE 144-742101

Cable Stripper No. 4-28H

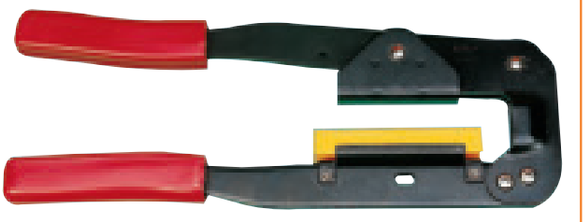
DURATOOL

- Stripping of all common round cables of 4 - 28mmØ
- Removeable reducing adapter, made of highly abrasion-resistant plastic (POM)
- No damage of the inner conductors due to infinitely variable adjustment of the cutting depth

20% OFF

Only **$18.28**
ORDER CODE 169-672401

Hand Tool (IDC)



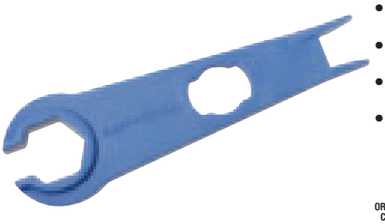
- Economy IDC hand tool
- Ideal for flat cable and connector assemblies
- Crimping distance = 6mm to 27.5mm (with adaptor)

30% OFF

Only **$23.39**
ORDER CODE 963-01001

Tooling part Helios H4 Solar Connector

Amphenol



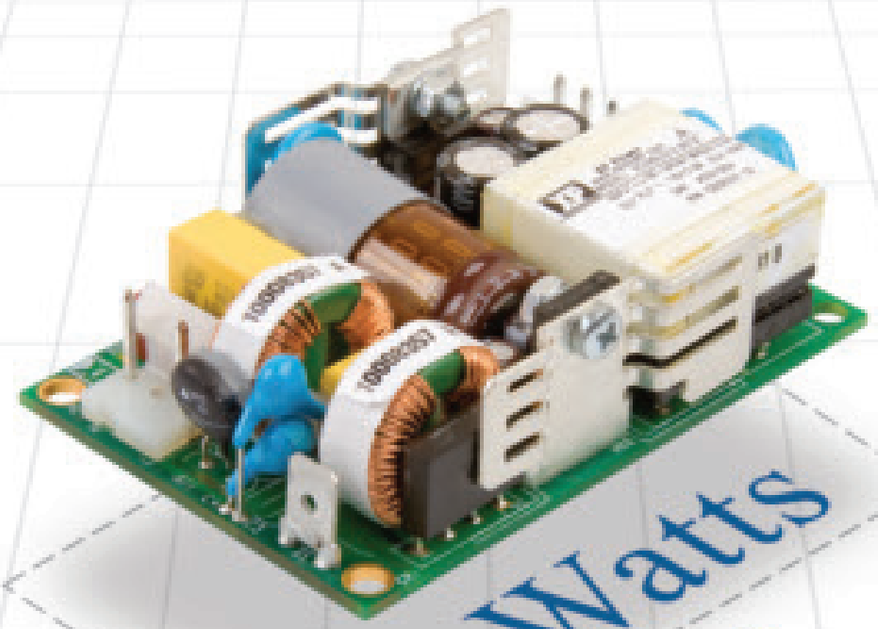
- Connector Type: Wrench Tool
- External Length / Height: 116.8mm
- Material: PA66, 30% GF
- Series: HELIOS H4

Only **$6.66**
ORDER CODE 175-634401

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

XP_element14_ad_1211.qxp:Layout 1 16/12/11 10:33 Page 1

Redefining Industry Expectations



GREEN•POWER

Open-frame & Enclosed
- 5 - 1500 Watts
- PCB or chassis mount
- Ultra-compact design
- Industrial & medical approvals
- Green Power versions

DC-DC Converters
- 0.25 - 100 Watts
- Regulated & unregulated versions
- 2:1 & 4:1 input ranges
- Industry standard SIL, DIL & SMD packages

External Power Supplies
- 12-250 Watts
- Energy efficiency level V
- Industrial & medical approvals
- Compact high efficiency design
- Optional class II

DIN Rail Mount
- 5-960 Watts
- Single or 3 phase input versions
- DC OK signal & LED indicator
- Rugged design for industrial applications

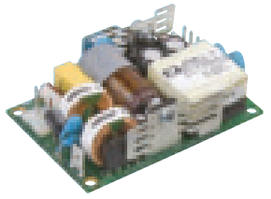
Visit our website to request a copy of our new 2011/12 Power Supply Guide and see our complete line of power products.

XP Power
www.xppower.com

P 31 Date: 20-01-12 time: 11:02

25 - 60 Watt Single Output Industrial and Medical PSUs

ECS Series



Input Voltage	80-264 VAC, Derate from 100% @ 90 VAC to 80% @ 80 VAC
Input Frequency	47-400Hz. (Safety approval covers the range 47-63Hz)
Line Regulation	±0.5% max.
Load Regulation	±1%
Ripple & Noise	1% pk-pk V1, 20 MHz BW
Operating Temperature	-20°C to +70°C, derate linearly from +50°C C at 2.5% / °C to 50% load at +70°C
MTBF	25+45W: 1072 kHrs to MIL-HDBK-217F at 25°C, GB 60W: 471 kHrs to MIL-HDBK-217F at 25°C, GB
Emissions	EN55022 level B conducted, EN55022 level A radiated ECS45, Level B ECS25
Safety Approvals	IEC60950-1, IEC60601-1, UL60950-1, UL60601-1, TUV EN60950-1, TUV 60601-1

20% OFF

- IT & Medical Safety Approvals
- Very Small 3" x 2" x 0.95" Package
- < 0.3 W No Load Input Power
- 25, 45 & 60 W - Convection Cooled Ratings
- Class I & Class II Installations
- -20°C to +70°C Operation
- 3 Year Warranty

Mftrs. List No.	Order Code	Price Each
ECS60US12	186-093001	71.12
ECS60US15	186-093101	71.12
ECS60US24	186-093201	71.12
ECS60US48	186-093301	71.12

85 - 250 Watt Single Output Desktop PSUs

Industrial and Medical Approvals

20% OFF

- Energy Star Level V
- CEC2008 & EISA2007 Compliant
- Medical & ITE Approvals
- Class I & Class II (85W & 100W)
- High Efficiency
- IP(x)1 Environmental Rating
- 3 Year Warranty

Input Voltage	90 - 264VAC
Input Frequency	47 - 63 Hz
Efficiency	90% typical
Ripple & Noise	1.5% max pk-pk
Line Regulation	±1% max.
Load Regulation	±5% max.
No Load Input Power	<0.5W
Operating Temperature	0°C to +60°C, derate linearly from 100% power at +40°C to 50% power at +60°C
Safety Approvals	EN60601-1, UL60601-1, CSA22.2 No. 601-1 per cUL, EN60950, UL60950
Emissions	EN55011/FCC/VCCI, Class B conducted, EN55011/FCC/VCCI, Class B radiated

Output Voltage	Mfrts.List No.	Order Code	Price Each
12AC	AHM85PS12 x 64	182-142601	111.76
15AC	AHM85PS15 x 64	182-142701	111.76
24	AHM85PS24 x 64	182-143101	111.76
12	AHM100PS12 x 64	182-143201	132.08
24	AHM100PS24 x 64	182-143501	170.06
48	AHM100PS48 x 64	182-143601	132.08
12	AHM150PS12 x 80	182-143701	152.40
12	AHM180PS12 x 80	182-144301	176.78
24	AHM180PS24 x 80	182-144601	176.78

50 - 100 Watt Single Output PSUs

Industrial Power Supplies

- Chassis Mount Industrial Supplies
- Green Mode, <0.5 W Standby Power
- Convection Cooled
- Class B Conducted & Radiated Emissions
- Output Voltages from 5 V to 48 V

20% OFF

Input Voltage	85-264 VAC (127-370 VDC)
Input Frequency	47 - 63 Hz
Efficiency	5 V: 82% min, All other outputs: 85% min at 230 VAC and full load
Line Regulation	±0.5%
Load Regulation	±0.5% (1% for 5V & 12V versions)
No Load Input Power	<0.5W
Ripple & Noise	1% maximum for all voltages
Operating Temperature	-10°C to +70°C, derate linearly +50°C at 2.5%/°C to 50% load at +70°C, start up at-20°C
Emissions	EN55022 Class B conducted & radiated
Safety Approvals	IEC60950-1, CSA C22.2 No. 60950-1, UL60950-1, TUV, EN60950-1

Output Voltage	Mfrts.List No.	Order Code	Price Each
12AC	VCS50US12 x	182-145801	62.14
24AC	VCS50US24 x	182-146001	65.41
48	VCS50US48 x	182-146101	50.80
24	VCS70US24 x	182-146601	73.25
5	VCS100US05 x	182-146801	62.99
15	VCS100US15 x	182-147001	62.99

40-60 Watt Compact Open Frame Power Supply

Industrial and Medical Approvals

- Small size
- Low cost
- Low leakage current
- Level B conducted emissions
- 4000V ac isolation
- 3 year warranty

Input Voltage	90 - 264VAC (120-370 VDC)
Input Frequency	47 - 63Hz, 440Hz
Leakage Current	<100µA at 115V ac, <200µA at 230V ac
Output Power	40W, 60W
Line Regulation	±0.5%
Load Regulation	±1.0% single output ±3% V1, ±5% V2 & V3 multi outputs
Ripple & Noise	1% pk-pk
Efficiency	80-85%
Operating Temperature	0 to 70°C, derate from 50°C to 50% at 70°C
Safety Approvals	CSA, EN, CE, UL recognised
EMC	EN55022 B, FCC Class B conducted

Output Voltage	Mfrts.List No.	Order Code	Price Each
7AC	ECM40US07 x 101.6	155-097901	65.41
9AC	ECM40US09 x	155-098001	65.41
12	ECM40US12 x 30.5	117-695701	65.41
24	ECM40US24 x 30.5	117-695901	65.41
5	ECM40UT31 x 101.6	117-697001	86.34
5	ECM40UT33 x 101.6	117-697401	86.34
5	ECM60US05 x 30.5	117-696201	91.56
12	ECM60US12 x 30.5	117-696301	91.56
5	ECM60UT31 x 101.6	117-696901	89.41

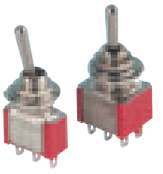
C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 32 Date: 20-01-12 time: 11:02

Miniature Panel Mounting

5A@120V ac/28V dc, 2A@250V ac

40% OFF



	Mftrs. List No.	Order Code	Price Each
SPDT On-On	1MS1T1B5M1QE	**947-337801**	2.96
SPDT On-Off-On	1MS3T1B5M1QE	**947-338601**	1.43
SPDT On-(On)	1MS2T1B5M1QE	**155-017801**	1.34
SPDT (On)-Off-(On)	1MS4T1B5M1QE	**155-017901**	3.22
SPDT On-Off-(On)	1MS5T1B5M1QE	**155-018001**	3.47
DPDT On-On	1MD1T1B5M1QE	**947-339401**	3.95
DPDT On-Off-On	1MD3T1B5M1QE	**947-340801**	5.85
DPDT On-On-On	1MD6T1B5M1QE	**155-018501**	4.55
3PDT On-On	1M31T1B5M1QE	**155-018701**	5.00
4PDT On-On	1M41T1B5M1QE	**155-019201**	7.49
4PDT On-Off-On	1M43T1B5M1QE	**155-019401**	4.23
4PDT On-On-On	1M46T1B5M1QE	**155-019701**	10.03

Electrical life	40000 ops.
Contact resistance	<10mohm @ 4V, 100mA
Operating temperature	-30°C to +85°C
Bush thread	14/4-40 UNS-2A
Lever length	10.25

Limit Switches

SZL-VL-S Series

- Improved 10A current capacity
- SPDT contact with positive opening of NC contacts
- Oil resist, water and dust proof with Pre-molded flexible cable gland

20% OFF

Actuator	Mftrs.List No.	Order Code	Price Each
Adjustable Rod	SZL-VL-S-C	**152-499001**	14.41
Cat Whisker / Spring Coil	SZL-VL-S-G	**152-499401**	16.61
Roller Plunger	SZL-VL-S-H	**152-499501**	16.29
Side Rotary Adjustable Lever	SZL-VL-S-J	**152-499701**	18.04

Special Purpose Fuses

LGR Series

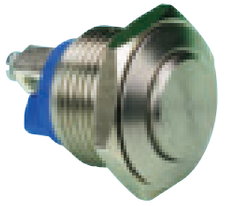
Voltage Rating:	300V AC
Max. Interrupting Rating:	10,000A
Approvals:	Standard 248-14 UL Listed (File No: E10480) CSA Certified (File No: LR29862)

20% OFF

Mftrs. List No.	Current Rating (A)	Order Code	Price Each
0LGR001.V	1	**183-018301**	5.67
0LGR003.V	3	**183-018401**	5.64
0LGR004.V	4	**183-018501**	5.64
0LGR005.V	5	**183-018601**	5.64
0LGR010.V	10	**183-018701**	5.83

Anti-vandal & Security Pushbutton Switches

AV Series



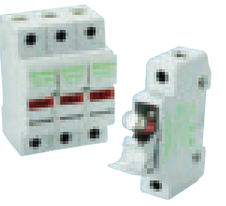
Insulation Resistance	1000MR min./500V dc
Contact Resistance	50mR max.
Operating Temperature	-20°C to +55°C
Mechanical Life	1000000 ops

20% OFF

Description	Mftr. List No.	Order Code	Price Each
Curved Actuator	AV1630C940	**108-243501**	30.43
Flat Actuator	AV0630C940	**108-243001**	31.03
Curved Actuator with Chamfer	AV0830C940	**108-243101**	25.51

POWR-SAFE "Dead Front" Holders

LPSC / LPSM Series



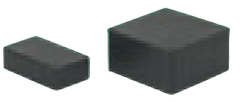
Mftrs. List No.	Fuse Type	Number of Poles	Indicating
LPSC0001Z	Class CC	1	No
LPSM0001Z	Midget	1	No
LPSM0002Z	Midget	2	No
LPSM0003Z	Midget	3	No

20% OFF

Mftrs. List No.	Order Code	Price Each
LPSC0001Z	**183-034701**	34.29
LPSM0001Z	**183-036001**	40.05
LPSM0002Z	**183-036201**	78.98
LPSM0003Z	**183-036501**	119.89

Multipurpose Plastic Enclosure

- Black ABS box ideally suited for mounting PC boards
- Includes vertical card guides
- Two piece lap joint construction provides protection against dust and splashing water **(IP54)**



	Dimensions (mm)				
Mftrs.List No.	H	W	D	Order Code	Price Each
1591LSBK	85	56	39	**142-657001**	7.01
1591BSBK	112	62	31	**142-657201**	7.37
1591CSBK	120	65	40	**142-657301**	10.91
1591DSBK	150	80	50	**142-657401**	13.01
1591ESBK	191	110	61	**142-657501**	17.47
1591GSBK	121	94	34	**142-657701**	12.73
1591TSBK	120	80	59	**142-658101**	13.28
1591USBK	120	120	59	**142-658201**	13.91

Potting Boxes

A range of 3 low cost potting boxes moulded in grey ABS for permanent encapsulation of small electronic circuits.

20% OFF

	Dimensions (mm)		
Mftrs. List No.	H	W	D
GPL05	19	24	36
GPL1	24	30	50
GPL2	27	42	55

Mftrs. List No.	Order Code	Price Each
GPL05	**645-64301**	2.07
GPL1	**301-15201**	2.20
GPL2	**301-16401**	2.97

ABS Miniature - '1551' Series

- 2 PCB stand-offs moulded into interior
- Provides protection against dust accumulation and splashing water **(IP54)**
- Satin-textured finish, assembles with two self-tapping screws

Mftrs. List No.	L	W	D	Order Code	Price Each
1551NBK	35	35	15	**100-949601**	2.74
1551MBK	35	35	20	**100-949901**	3.44
1551GBK	50	35	20	**353-641501**	3.40
1551RBK	50	50	20	**100-951001**	5.19
1551HBK	60	35	20	**353-642701**	3.96
1551KBK	80	40	20	**353-643901**	4.52

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 33 Date: 20-01-12 time: 11:03

Axial AC Fan

172x151x51mm

Voltage V ac	Power Watts	Air Flow cu ft/min	Speed RPM	Noise dBA	Lead wire/Terminal	Mftrs. List No.
115	25/27	203/239	2800/3200	51/58	Terminal	A1175-HBT TC.GN
230	25/26	203/239	2800/3200	51/58	Lead wire	A2175-HBL TC GN
230	25/26	203/239	2800/3200	51/58	Terminal	A2175-HBT TC GN

Mftrs. List No.	Voltage	Order Code	Price Each
A1175-HBT TC.GN	115V	**118-150201**	49.74
A2175-HBL TC GN	230V	**118-150401**	166.87
A2175-HBT TC GN	230V	**118-150701**	91.81

DC Axial Flow Fans

40% OFF

Vdc	H	W	D	Mftrs. List No.	Order Code	Price Each
5	40	40	10	MCKD0504PFS2.11.GN	**156-840501**	9.14
12	40	40	10	MCKD1204PFS2.11.GN	**156-840601**	9.14
5	40	40	20	MCKD0504PKS2.GN	**156-840701**	13.28
5	50	50	10	MCKD0505PFS2.11.GN	**156-840901**	10.07
12	50	50	10	MCKD1205PFS2.11.GN	**156-841001**	4.24
5	50	50	15	MCKD0505PHS2.GN	**156-841101**	10.37
12	50	50	15	MCKD1205PHS2.GN	**156-841201**	11.45
24	50	50	15	MCKD2405PHS2.GN	**156-841401**	14.19
12	60	60	15	MCKD1206PHS2.GN	**156-841601**	13.11
5	60	60	25	MCKD0506PTB2.(2).GN	**156-841701**	8.76
12	80	80	20	MCKD1208PKB2.13.(2).GN	**156-841801**	9.33

Thermal Circuit Breaker

Push to Reset - W28 Series

- Single pole thermal circuit breaker
- Push to reset snap action mechanism
- Button extends for visual trip indication

Current Rating	Mftrs. List No.	Order Code	Price Each
3A	W28-XQ1A-3	**965-907201**	6.18
5A	W28-XQ1A-5	**965-908001**	5.20
8A	W28-XQ1A-8	**143-622201**	6.68
10A	W28-XQ1A-10	**965-909901**	4.76
8A	W28-XQ1A-8	**143-622201**	6.68
15A	W28-XQ1A-15	**965-910201**	5.71
20A	W28-XQ1A-20	**965-911001**	5.14

Metal Enclosure

22mm Holes

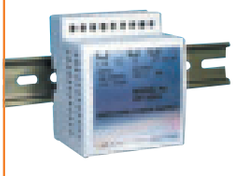
- Metal enclosures in zinc alloy with 1 or 2 22.2mm dia. holes suitable for 22mm manual control and signalling units
- Protection to **IP65.** Usable depth 49mm

20% OFF

Description	Mftrs. List No.	Order Code	Price Each
One hole enclosure	XAPM1201H29	**175-51201**	48.54
Two hole enclosure	XAPM1202H29	**175-51301**	50.82

Single Output Din Rail 25-45W

DR-45 Series



40% OFF

Mftrs. List No.	Output	Tol.	Ripple & Noise
DR-4505	5V, 5A	±2%	100mV
DR-4515	15V, 2.8A	±1%	240mV
DR-4524	24V, 2.0A	±1%	480mV

Mftrs List No.	Order Code	Price Each
DR-4505	**125-495601**	145.05
DR-4515	**125-495801**	145.05
DR-4524	**125-496101**	145.05

DPS Series 5W-480W AC/DC DIN Rail Power Supplies

20% OFF

Mftrs. List No.	Output Power	Voltage	Current	WxHxD
DPS-1-005-24	5W	24V	210mA	22.5 x 90 x 115mm
DPS-1-018-24	18W	24V	750mA	22.5 x 90 x 115mm
DPS-1-030-24	30W	24V	1.25A	40.5 x 90 x 115mm
DPS-1-120-24	120W	24V	5A	63.2 x 123.6 x 116.6mm
DPS-1-240-24	240W	24V	10A	83 x 125 x 116mm
DPS-1-480-24	480W	24V	20A	175 x 125 x 116mm

Mftrs. List No.	Order Code	Price Each
DPS-1-005-24	**171-451701**	58.52
DPS-1-018-24	**171-451901**	73.59
DPS-1-030-24	**171-452001**	90.22
DPS-1-120-24	**171-452301**	155.83
DPS-1-240-24	**171-452401**	249.93
DPS-1-480-24	**171-452501**	369.00

Sealed Momentary Pushbutton Switches

Electrical Life	500000 ops	Insulation Resistance	<1MR
Operating Temperature	-40°C to +125°C (standard)	Contact Resistance	<50mR
Total Travel	1.5mm	Operating Force	3N

Colour	Mftrs.List No.	Order Code	Price Each
Blue	IBR3SAD1	**108-243601**	11.76
Black	IBR3SAD2	**108-243801**	11.76
Green	IBR3SAD3	**108-243901**	11.76
Red	IBR3SAD6	**108-244001**	11.76

20% OFF

8600 Rocker Switches-Miniature

Electrical Life	10000 ops	Insulation Resistance	>20MR
Mechanical Life	50000 ops	Contact Resistance	<10mR
Operating Temperature	0°C to +90°C		

Approved to **BEAB, VDE, SEV, DEMKO, SEMKO, NEMKO, SEMKO, KEMA, SETI, UTE, OVE** and **CSA**. **UL** recognised

20% OFF

Non Illuminated	Order Code	Price Each
SPST	**151-13301**	1.17
SPST	**480-39301**	2.29
SPDT	**151-13401**	1.42
SPDT	**733-87801**	1.92
DPST	**151-13501**	2.04
DPDT	**151-13601**	2.41
DPDT	**767-405801**	3.34

Solid State Relay - DIN Rail Mount

CKR240 Series

- Industry standard 22.5mm narrow profile
- Ideal for motor pump and heating element switching
- **UL** Recognised, **CSA, VDE** approved

Load Current	Load Voltage	Mftrs.List No.	Order Code	Price Each
DC Control - Zero Cross				
10A	24Vrms to 280Vrms	CKRD2410	**120-030101**	68.32
20A	24Vrms to 280Vrms	CKRD2420	**120-030201**	73.08
AC Control - Zero Cross				
10A	24Vrms to 280Vrms	CKRA2410	**120-029901**	73.04
30A	24Vrms to 280Vrms	CKRA2430	**120-030001**	89.13
20A	24Vrms to 280Vrms	CKRA2420	**161-376001**	83.43

30% OFF

Enclosed Solar Isolators - SI Series

- Operator independent trigger ratchet switching mechanism
- High speed switching 5mS max.
- Maximum torque 1Nm for easy operation
- **UL** Recognised

20% OFF

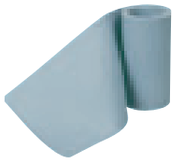
DC21B Switching Capacity

@ 600V dc	@ 1000V dc	Mftrs. List No.	Order Code	Price Each
12A	6A	SI12-PE64R-2	**189-530901**	101.33
16A	9A	SI16-PE64R-2	**189-531101**	126.32
12A	11A	SI25-PE64R-2	**189-531201**	134.10
12A	13A	SI32-PE64R-2	**189-531301**	175.98

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

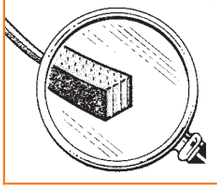
P 34 Date: 20-01-12 time: 11:03

'WS' Silicone Shielding Material



- This shielding material is a composite of monel wires embedded in a solid silicone, and orientated to a matrix of 100 per square centimetre
- Provides excellent RF attenuation through wire point contact on both sides of the gasket and will also provide environmental sealing to **IP65** or **IP66** depending on seal compression

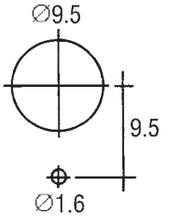
Sheet size
H=900, W=100, Th=1.5



HOT PRICE

Only
$46.26
ORDER CODE 121-914401

25.4 mm Diameter Eleven Turn Dial



- Round vernier scale
- 1" diameter
- 1/4" shaft adapter
- Black chrome finish with white markings
- Brushed chrome finish with black markings
- Satin chrome finish with black or white markings

Only
$31.70
ORDER CODE 114-473201

10 Turn Digital Counting Dial

- White markings on a black background
- Recessed mounting reducing front panel projection
- Supplied with lock nut and allen key

Turns	0-10
Readout	Digital
Division/Turn	500
Break	Yes
Diameter	28mm
Depth	31.5mm
Shaft Diameter	6mm

20% OFF

Only
$34.29
ORDER CODE 107-384901

7/8" (22.2 mm) Multiturn Wirewound

534 Series

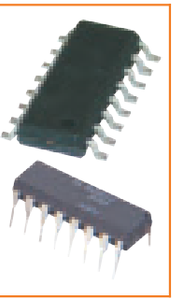
Metric

- Track Resistance: 10kohm
- Track Taper: Linear
- No. of Turns: 10
- Resistance Tolerance: ± 5%
- Voltage Rating: 141V
- Power Rating: 2W
- Potentiometer Mounting: Panel
- Adjustment Type: Shaft

20% OFF

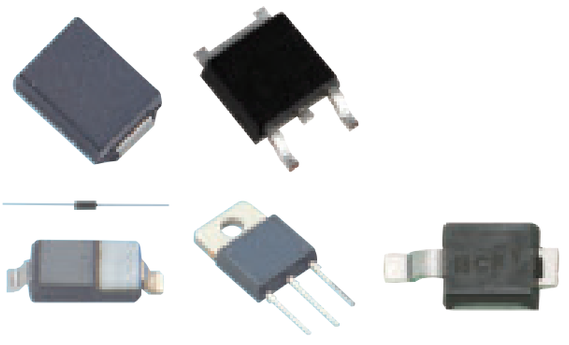
Only
$35.01
ORDER CODE 114-478601

High Voltage, High Current Darlington Transistor Arrays



Mftr.	Pins	Pkg	Description	Mftrs. List No.	Order Code	Price Each +
ST	16	DIP	Transistor Array - 7 NPN Darlingtons, +5V Input, 500mA, 50V (TTL/CMOS).	ULN2003A	109-442101	0.36
TI	16	DIP	Transistor Array - 7 NPN Darlingtons, +5V Input, 500mA, 50V (TTL/CMOS).	ULN2003ANE4	121-097301	0.75
TI	16	SOIC	Transistor Array - 7 NPN Darlingtons, 6V to 15V Input, 500mA, 50V (CMOS).	ULN2004ADE4	SMD 121-097401	1.08
TI	16	DIP	Transistor Array - 7 NPN Darlingtons, 6V to 15V Input, 500mA, 50V (CMOS).	ULN2004AN	110-304101	0.78
ST	18	DIP	Transistor Array, 8 NPN Darlingtons, +5V Input, 500mA 50V (TTL/CMOS).	ULN2803A	109-442801	1.61
ST	18	DIP	Transistor Array, 8 NPN Darlingtons, 6V to 15V Input, 500mA 50V (CMOS).	ULN2804A	109-442901	1.61
INTS	16	DIP	Transistor Array - 5 NPN General Purpose Transistors	CA3083Z	120-154001	2.62
MICR	22	DIP	High Speed BIMOS Darlington Array (8 latches). UCN5801A compatible.	MIC5801YN	121-348501	5.52

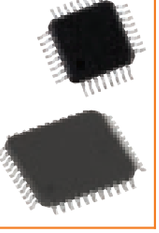
Schottky Power Rectifier



Mftrs. List No.	Order Code	Price Each
MBRS1100T3G	955-586201 RL	0.44
MBRA130LT3G	955-597801 RL	0.28
MBRA140T3G	955-598601 RL	0.39
MBR160RLG	955-676101	0.37
MBR340RLG	955-677001	0.30
MBR0520LT1G	955-691501 RL	0.14
MBR0540T1G	955-692301 RL	0.36
MBRS130LT3G	955-693101 RL	0.41
MBRS360T3G	955-694001 RL	0.65
MBRD640CTT4G	955-696601 RL	0.81
MBRD1035CTLG	955-697401	1.48
MBRS140T3G	955-723701 RL	0.30

8-bit Microcontroller with 8/16/32K Bytes of ISP Flash and USB Controller

Atmel's low power, high performance AVR microcontrollers handle demanding 8- and 16-bit applications. With a single cycle instruction RISC CPU, innovative picoPower® technology, and a rich feature set, the AVR architecture ensures fast code execution combined with the lowest possible power consumption.



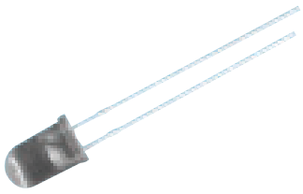
Description	Mftrs. List No.	Order Code	Price Each
8-Bit CMOS MCU, 8K Flash, 512B SRAM, USB	ATMEGA8U2-AU	SMD 174-853501	5.17
8-Bit, MCU, 16K FLASH, 32TQFP	ATMEGA16U2-AU	184-160701	6.04
8-Bit MCU, 128K FLASH, 16K RAM	ATMEGA1284P-AU	SMD 171-548001	16.96
8-Bit MCU with 32K Flash, 1K SRAM, USB	ATMEGA32U4-AU	SMD 174-852501	7.56
8-Bit MCU with 32K Flash, 1K SRAM, USB	ATMEGA32U2-AU	SMD 174-852401	6.69
8-Bit MCU with 16K Flash, 32TQFP	ATMEGA168A-AU	184-160301	5.38

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 35 Date: 20-01-12 time: 14:58

Round LED Lamp - Water Clear Lens

OVL-33 Series



- Standard round package
- High luminous output
- Water clear lens

30% OFF

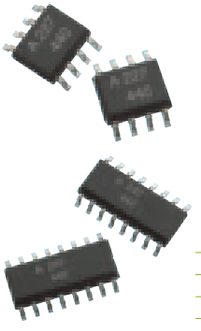
Colour	LED Size	Viewing Angle	Typ (mcd)	If (mA)	Vf (V)	Dominant Wavelength (nm)	Mftrs. List No.	Order Code	Price Each 10+
White	3mm / T-1	30°	8000	30	4	–	OVL-3321	171-669601	0.47
White	5mm / T-1 3/4	15°	18000	30	4	–	OVL-5521	171-670201	0.49
Blue	3mm / T-1	30°	1700	30	4	465	OVL-3323	171-669701	0.35
Blue	5mm / T-1 3/4	15°	4300	30	4	465	OVL-5523	171-670301	0.38
Green	3mm / T-1	30°	5000	30	4	520	OVL-3324	171-669801	0.47
Green	5mm / T-1 3/4	15°	13000	30	4	520	OVL-5524	171-670401	0.45
Red	3mm / T-1	30°	5500	30	2.6	625	OVL-3328	171-670101	0.49
Red	5mm / T-1 3/4	15°	7500	30	2.6	625	OVL-5528	171-670601	0.49
Yellow	3mm / T-1	30°	5000	30	2.5	589	OVL-3326	171-669901	0.61
Yellow	5mm / T-1 3/4	15°	10000	30	2.5	589	OVL-5526	171-670501	0.61

Surface Mount Chip LEDs

Lens	Viewing Angle	Luminous Intensity Typ @ 20 mA (mcd)	Current If (mA)	Voltage Vf Max (V)	Peak Wavelength (nm)	Mftrs. List No.	Order Code	Price Each
Untinted Diffused	170°	15	20	2.6	570	HSMG-C150.	855-459501 RL	0.35
Untinted Diffused	170°	15	20	2.6	570	HSMG-C190.	855-460901 RL	0.29
Tinted Diffused	170°	15	20	2.6	570	HSMG-C170	579-085201 RL	0.09
Tinted Diffused	170°	8	20	2.2	605	HSMD-C170	579-086401 RL	0.36
Untinted Diffused	170°	90	20	2.4	637	HSMC-C170.	855-450101 RL	0.73
Untinted Diffused	170°	10	20	2.6	630	HSMS-C190.	855-476501 RL	0.28
Tinted Diffused	170°	10	20	2.1	630	HSMS-C170	579-083901 RL	0.53
Tinted Diffused	170°	17	20	1.8	660	HSMH-C170	579-084001 RL	0.15
Diffused	170°	10 / 15		2.6	630 / 570	HSMF-C155	579-088801 RL	0.26
Tinted Diffused	170°	8	20	2.1	589	HSMY-C170	579-087601 RL	0.53
Untinted Non-diffused	140°	140	20	3.9	520	HSMQ-C265	165-210701 RL	1.01
Untinted Diffused	150°	15	20	2.2	570	HSMG-C265	579-090601 RL	0.64
Untinted Diffused	150°	17	20	1.8	660	HSMH-C265	579-089001 RL	0.36

Phototransistor Optocouplers

DC Input Multi-Channel Half-Pitch



The ACPL-227 is a DC-input dual channel half-pitch phototransistor optocoupler which contains two light emitting diodes optically coupled to two separate phototransistors. It is packaged in an 8-pin SO package.
The ACPL-247 is a DC-input quad channel half-pitch phototransistor optocoupler which contains four light emitting diodes optically coupled to four separate phototransistors. It is packaged in a 16-pin SO package.

Channels	AV Input Current mA	CTR @10mA (min)	Switching Time Rise	Switching Time Fall	Package	Mftrs. List No.
2	20	50%	2µs	3µs	SOIC	ACPL-227-50BE
4	20	100%	2µs	3µs	SOIC	ACPL-247-500E
4	20	100%	2µs	3µs	SOIC	ACPL-247-560E

Mftrs. List No.	Order Code	Price Each
ACPL-227-50BE	163-475001	0.97
ACPL-247-500E	163-475801 RL	2.53
ACPL-247-560E	163-475901 RL	2.22

Ultra Violet 385nm LED

SSL-LXT046UV1C

- Forward Current: 20mA
- Forward Voltage: 3.3V
- LED Mounting: Through Hole
- Lens Shape: Round

Only **$14.01**

ORDER CODE 190-194901

3.5 " TFT LCD module

KENTEC ELECTRONICS

K350QVG-V2-F

- Standard LCD Module
- 320 x RGB x 240 Dots
- 3.5" 262K colours TFT display
- White LED backlight
- Touch Panel

Single: Dia=1.0 core, 2.2 overall
Twin: 2 x single cable, welded in figure 8 format.

Only **$34.72**

ORDER CODE 189-355001

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

element14

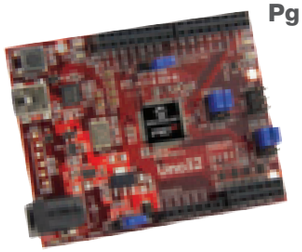
TOP SEARCHED PRODUCTS ONLINE

Order now to enjoy great savings!

CHIPKIT UNO32 Development Board
Order code: 189321101
$41.12
Pg 41

20% OFF

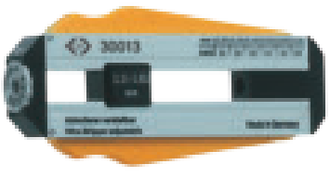
DIGILENT



Precision wire strippers
Order code: 136451401
$47.49
Pg 28

40% OFF

C.K



XPort™ Embedded Ethernet Device Server
Order code: 129788301
$87.63
Pg 43

40% OFF

LANTRONIX®

Fluke 179/EDA2 Industrial Combo Kit
Order code: 128967401
$537.50
Pg 6

FLUKE

USB Microscope
Order code: 182238601
$148.36
Pg 26

30% OFF

DURATOOL

Clamp Meter with Frequency
Order code: 128364001
$66.84
Pg 7

50% OFF

TENMA®

Technician's Rucksack
Order code: 188556601
$103.75
Pg 22

30% OFF

C.K MAGMA
SMARTER BY DESIGN

Suspension Multi-Tool
Order code: 129311001
$74.89
Pg 3

50% OFF

GERBER
LEGENDARY BLADES

P 37 Date: 20-01-12 time: 11:03

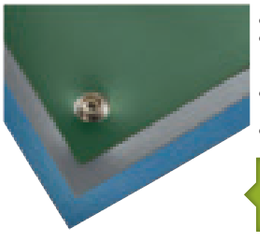
ESD Wrist Strap Set

- All plastic wrist band offering zero particle contamination
- For use within most classified cleanrooms
- Lightweight in structure
- Supplied with a 6ft grounding cord
- Available with a choice of terminations

20% OFF

Termination	Mftrs. List No.	Order Code	Price Each
Crocodile Clip	066-0053	**150-319001**	14.14
10mm Stud	066-0055	**150-319101**	13.85

ESD Bench Matting



- Suitable for both bench and floor coverings
- 2mm thick double-layer structure (0.5mm thick static-dissipative layer and 1.5mm conductive layer)
- Smooth finish with 4 x 10mm studs at each corner
- 1200mm x 600mm

30% OFF

Only **$122.59**

ORDER CODE 150-319801

Straight Earth Lead

30% OFF

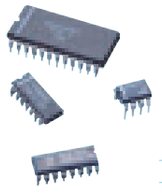
Black straight earth lead with 10mm stud to ring terminal

- Lead Length 1.5m
- 10mm stud to ring terminal
- Colour: Black

Only **$10.76**

ORDER CODE 168-789701

Conductive Foam

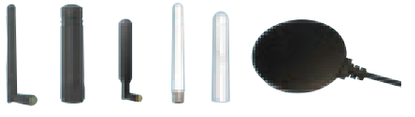


Carbon impregnated polyurethane foam ideal for pin insertion. It provides both ESD and mechanical protecion by retaining devices securely by their pins.

30% OFF

Description	Size	Mftrs. List No.	Order Code	Price Each
High Density	127 x 228 x 6 mm	038-0100	**168-784601**	1.14
High Density	305 x 305 x 6 mm	038-0016	**168-785501**	3.25
Low Density	305 x 305 x 6 mm	039-0050	**168-786601**	2.08

ISM Band & Licensed Band Antennas



20% OFF

Description	Mftrs. List No.	Gain	Order Code	Price Each
GSM,Quad Band	IR-GSMQB-00-C5	0-1dBi	**173-518901**	13.34
GSM/UMTS, Penta Band	IR-GSMPB-02-C5	2dBi	**173-519101**	18.02
GPS/GSM, Combo, SMA & FME	OE-CMB-RD-C5C6	6dBi(GPS) & 0-2dBi(GSM)	**173-519401**	41.41

Single Sided Stripboard

KELAN

- Board Thickness: 1.9mm
- Hole Pitch: 2.54mm
- No. of Holes: 5904
- No. of Strips: 41
- No. of Ways: 144

HOT PRICE

Only **$10.49**

ORDER CODE 147-89901

Matrix Pitch	L (mm)	W (mm)	Strips mm	Rows
0.1"	114.3	365.8	41 x 1.9	144

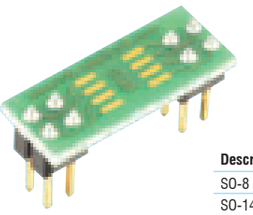
Veroboard

Copper Thickness	35µm
Hole Diameters	1.02mm
Hole Grid	2.54x2.54mm
Board Thickness	1.6mm
Base Material	SRBP

30% OFF

Size	Tracks	Holes/ Track	Mftrs.List No.	Order Code	Price Each
121x102	41	44	01-0021	**153-693801**	12.66
100x160	36	60	SEP-96	**153-693901**	17.69
95x454	34	179	01-0040	**153-694001**	35.55
179x454	60	179	01-0042	**153-694201**	62.94

SO-SMD Multiadapter

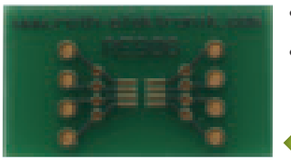


- EPOXY fibre-glass FR4
- 1.5 mm double-sided 35 µm Cu
- Through plated holes Ø 1mm

30% OFF

Description	Mftrs. List No.	Order Code	Price Each
SO-8	RE932-01	**142-616901**	8.68
SO-14	RE932-03	**142-617101**	9.64
SO-16	RE932-04	**142-617201**	8.68

SC70 - SOT23 Adaptor



- FR4 EPOXY fibre-glass 1.50 mm double-sided 35 µm CU (pth)
- Suitable for 2.54 mm grid (holeØ 1.00 mm) and 1.27 mm grid (hole Ø 0.30 mm)

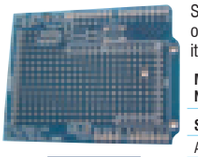
30% OFF

Only **$12.56**

ORDER CODE 171-432701

- Adaptor for SC70, SOT23 (pitch 0.65 mm)
- Size 13.5 x 23.5 mm

Arduino Shields and Shield Kits



Shields are boards that can be plugged on top of the Arduino PCB extending its capabilities.

20% OFF

Mftrs. List No.	Description	Order Code	Price Each
Shields			
A000024	Proto PCB Shield	**184-869501**	7.59
A000038	MEGA Proto PCB Shield	**184-869801**	8.86
Shield Kits			
A000039	MEGA Proto PCB Shield Kit	**184-869901**	23.47

Box Enclosure for Arduino Boards

A flame retardant plastic enclosure that can fit an Arduino Board, ETH shield and a battery (Not included).

- Made with Acrylonitrile Butadiene Styrene (ABS) plastic
- Dimensions 87x64x28mm

20% OFF

Only **$17.44**

ORDER CODE 184-869201

Getting Started with Arduino

By Massimo Banzi

Getting Started with Arduino gives you lots of ideas for projects and helps you get going on them right away. To use the introductory examples in this book, all you need is a USB Arduino, USB A-B cable and an LED.

30% OFF

Only **$19.18**

ORDER CODE 184-870001

Prototyping Accessories

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

the knode

element14

CAD TOOLS

http://nz.element14.com/cadsoft

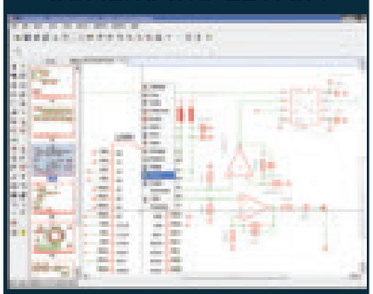
OUT NOW!

SCHEMATIC • LAYOUT • AUTOROUTER

Powerful, Yet Affordable PC-board Design Software

CadSoft EAGLE V6 introduces a new XML database structure allowing you to easily import or export data files to and from other CAD programs. CadSoft EAGLE V6 offers three modules embedded in a single user interface:

SCHEMATIC EDITOR



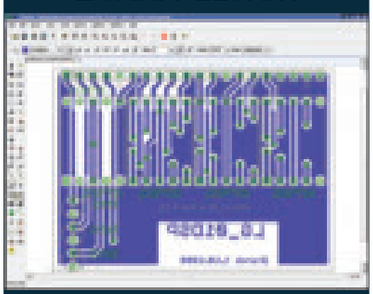
Step 1:
Place the part symbols

Gives you more than just a circuit diagram. When the circuit is drawn, a large part of the layout work is already done.

NEW New hierarchical structure to combine schematics more effectively.

and /or

LAYOUT EDITOR



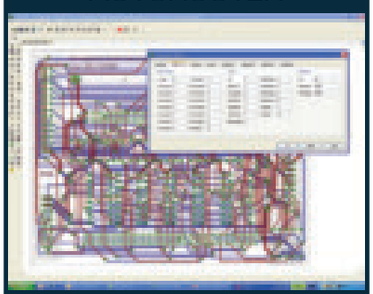
Step 2:
Placing the part

Allows you to design whole circuit boards manually: define the board's dimensions, arrange the components on the board and layout the traces.

NEW New differential pair routing/ impedance matching for high speed.

and /or

AUTOROUTER



Step 3:
Conventional layouts

Design rules and strategy parameters can be set by the user. A "follow me" router has been implemented with real time Design Rule Checks.

NEW New Undo/Redo Feature.

Select the version that is right for you. Available for Windows®, Linux® and Macintosh®

EAGLE TRIAL — 4 schematic sheets • 4 signal layers • 150x100mm routing area • Free trial version for 30 days

EAGLE LIGHT — 1 schematic sheet • 2 signal layers • 100x80mm routing area

EAGLE STANDARD — 99 schematic sheets • 6 signal layers • 160x100mm routing area

EAGLE PROFESSIONAL — 999 schematic sheets • 16 signal layers • 4x4m routing area

*Selectable number of users (1, 3, 5, 10, 30, 50)

*Selectable combination of modules (Schematic editor, Layout editor, Autorouter)

Software Application	Software Edition / Licence Type	Mftrs.List No.	Order Code	Price Each
PCB Design, Schematic Capture, Layout Editor, Auto Router	Light/ Single User	LSR-1CL ASIA	**207523001**	$90.46
PCB Design, Layout Editor, Schematic Capture	Standard/ Single User	LS-1CS ASIA	**207523301**	$753.81
PCB Design, Layout Editor, Auto Router	Professional/ 30 Users	LR-30CP ASIA	**207528501**	$9,006.35

CAD TOOLS

ULTRA LIBRARIAN

The fastest solution for EDA Library Creation, Import, Export, Change and Consolidation.

- 10-20 times faster than existing EDA Library tools
- Accurate and Easy to Use
- Single solution supports multiple EDA systems
- Template-driven for accuracy, consistency and ease of use
- Global Library change capability
- Supports footprints and symbols in both industry standards and in specific or custom company standards
- Automates the collection of data and creation of the components and then provides users with the ability to export to the CAD tools of their choice
- Build from over 300 families of parts, SMT, thru-hole, metric or English units. Build both footprint and symbols in just minutes

Attributes	Ultra Librarian Lite	Ultra Librarian SE
Create footprint from BXL download	•	•
Export Multiple Tools	•	•
Create Symbol from BXL download	•	•
Download Components from ADI website	•	•
Load & Export multiple components	•	•
Create Footprint From Spec Sheet	•	•
Modify Footprints to meet Company Specs	•	•
Download Footprints from ADI website	•	•
Print Capable	•	•
Save XLR Capable	•	•
Create Symbols with multiple gates		•
Create Symbol Automatically		•
DRC Component and Footprints		•
Read Acrobat PDF into EXCEL		•
Crossprobing of Footprints and Symbols		•

Manufacturer's List No.	Order Code	Price Each
ULLITE-EAGLE	**187252301**	$373.94
ULLITE-ALTIUM	**187253101**	$1,672.46
ULSE-EAGLE	**187252901**	$1,118.10
ULSE-MENTOR PADS	**187254701**	$3,748.86

OPERATING SYSTEMS & STACKS

http://nz.element14.com/micrium

MICRIUM

Micrium µC/OS-III™ Real-Time Operating System Kernels are designed to save time on embedded system projects. In addition to the features **inherent in µC/OS-II, µC/OS-III** also manages an unlimited number of application tasks, and features an **interrupt disable time** of near zero. It supports **ARM7/9, Cortex-MX, Nios-II, PowerPC, Coldfire, i.MX, Microblaze, RX600, H8, SH, M16C, M32C, Blackfin**, and more.

Micrium embedded components are priced as individual modules or as bundled solutions. We offer the RTOS, Stacks and software components for your next embedded design. Contact us for complete pricing information for your particular requirements. Below are our top sellers:

MCU	Description	Core Sub-Architecture:	Mftrs.List No.	Order Code	Price Each
ATMEGA328P-PU	RTOS µC/OS-III	megaAVR	KRN-K3XX-AVRUCA-P-P1-SINGLE	**190053701**	$13,859.77
	Stacks - TCP/IP µC/TCP-IP	AVR32	NET-DRVR-AVRUCA-P-P1-SINGLE	**190074001**	$19,403.67
	Stacks - USB Device µC/USB Device	AVR32	USB-USBD-AVRUCA-P-P1-SINGLE	**190093101**	$8,493.32
PIC12F675-I/P	RTOS µC/OS-III	PIC32	KRN-K3XX-PIC32X-P-P1-SINGLE	**190045301**	$13,859.77
	Stacks - TCP/IP µC/TCP-IP	PIC32	NET-DRVR-PIC32X-P-P1-SINGLE	**190074001**	$19,403.67

Single Product License
Any one single specified product.

Product Line License
All products that do the same function and are in the same product family.

CPU-Type License (Platform License)
All products that use the same CPU chip type.

Site License
Products built at one physical site.

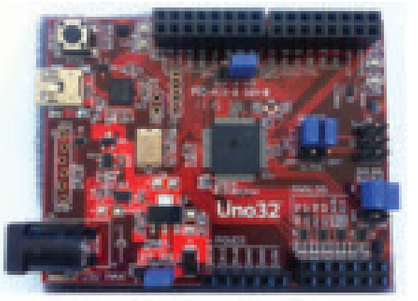
P 40 Date: 20-01-12 time: 11:03

RoadTest

DIGILENT

ChipKIT Uno32

Development board



Review by Lachie Ferrier,
lachieferrier.com

chipKIT™ UNO 32 Road Test

There are two versions of the ChipKIT development boards much like the Arduino boards. There's the ChipKIT Uno32 and the ChipKIT Mega 32. The ChipKIT Uno32 is the lower end board and lacks some of the features of the ChipKIT Mega 32 like Ethernet, USB and 83 I/O pins. However, the ChipKIT Uno is a very powerful board anyway. It has:

- 42 I/O pins
- 80 Mhz 32 bit processing power
- 128K of Flash and 16K of SRAM
- Arduino form factor and compatibility

Out of the box

I received my ChipKIT Uno32 board from element14 Australia. The ChipKIT Uno 32 comes in a box very similar to the one the official Arduino Uno comes in. A nice addition is some anti static foam for the board to rest on so it isn't fried during it's journey to your front door.

It has a LOT of input and output pins- 42 in total. Everything is laid out carefully in the same layout as the Arduino Uno so there is no need to worry about shield compatibility.

At the core of the development board is PIC32MX320F128 processor, a powerful processor with 128K of flash and 16K of SRAM. Here's a comparison between the ChipKIT Uno32 and the Arduino Uno:

ChipKIT Uno32 (Microchip 32 bit PIC32MX320F128) vs Arduino Uno (AVR 8 bit ATMega328):

- Flash: 128K vs 32KB
- SRAM: 16K vs 2KB
- I/O: 42 vs 14
- Speed: 80Mhz vs 16Mhz
- Operating voltage: 3.3V vs 5V

So it's pretty clear to see that this is a powerhouse out of the box compared to the official Arduino Uno. And it even runs at a lower voltage than the standard Arduino Uno.

Getting off the ground

To get started with a ChipKIT Uno32 you'll need to download a special modified Arduino IDE from:
https://github.com/ChipKIT32/ChipKIT32-MAX/downloads

Once you have the modified IDE downloaded and extracted you can start the MPIDE. You're presented with what looks like the normal Arduino IDE with a message in the splash box saying it's a modified version. Have a look at the boards menu though. It has a multitude of other PIC32 boards along with the standard Arduino boards.

Hit the upload button and the pin 13 LED flashes just like on a standard Arduino.

So setting up the ChipKIT Uno32 is just as easy as setting up an Arduino Uno. Let's do a speed comparison between the two.

Speed test!

The main differences between the ChipKIT Uno32 and a standard Arduino Uno are the amount of I/O pins and the computing speed. It's pretty obvious the difference in pins so I decided to do a computing test.

I used serial to do a basic speed comparison between the ChipKIT Uno32 and an Arduino Duemilanove. I wrote this simple program to count to a million and report how long it took by printing out the time in milliseconds to the serial monitor. Once it has printed out the time it has taken in milliseconds it prints it out every 5 seconds as a sort of test to see whether the value was true.

The ChipKIT Uno32 achieved a time of 250 milliseconds every time.
A stock standard Arduino Duemilanove achieved a time of 2263 milliseconds every time.

Some features

- Mini USB connector. Just like an ethernet's so it doesn't short against shields.
- Open source. Get the schematics and everything else you could ever need here: http://www.digilentinc.com/Products/Detail.cfm?NavPath=2,892,893&Prod=ChipKIT-UNO32
- 2 User LEDs. On pin 13 and 43. They are placed on the outer edge of the board so they can still be clearly seen when a shield is plugged in.
- Lots of input and output pins. 42 in fact. 12 analog pins.
- 32 bits and 80 Mhz of grunt.
- ICSP PIC programming header holes. If you own a PICkit 3 you can use that to program it.
- Heaps of program space.

So those are the good bits. Here's the bad stuff:

- The chip can't be removed.
- No AVR ICSP programming header. So you can't program this with an AVR ICSP.
- 3.3V operating voltage means that some shields won't work. Most should though.
- There's no atmega8u2 chip like in the Arduino Uno. No emulating HID USB devices.

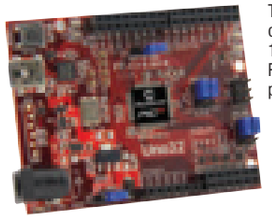
But that's about all that's wrong with it. It's a great board for those who love the Arduino concept but need something a bit more powerful. It's easy to get started with and is extremely powerful (especially the Mega model). I highly recommend it.

Read the full review of the Agilent U1272A at
http://au.element14.com/connectreview
or
http://nz.element14.com/connectreview
and don't forget to leave your comments and questions.

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 41 Date: 20-01-12 time: 11:03

chipKIT Uno32™ Development Board

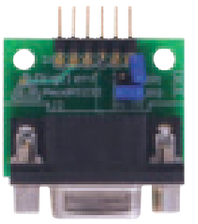


The chipKIT Uno32™ development board is a clone of the Arduino Uno board, and features 128 KB Flash program memory and 16 KB RAM, with two each of the I2C, SPI and UART peripherals.

Only **$41.12**

ORDER CODE 189-321101

PmodRS232™ Converter Module Board



Translates voltage from the logic levels used by Digilent system boards to the RS232 voltage used for serial communications.

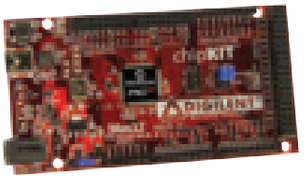
Features:

- Max32™ RS232 transceiver
- DB9 connector and 6-pin header
- Transmit and receive data functions
- Optional RTS and CTS handshaking functions
- Small form factor (1.00" x 1.30")

Only **$27.12**

ORDER CODE 206-185801

chipKIT Max32™ Development Board



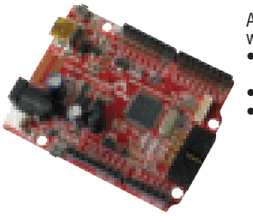
A clone of the Arduino Mega board, the chipKIT Max32™ development board features 512 KB Flash program memory and 128 KB RAM, with USB, CAN and Ethernet communication, as well as 5xI2C,4xSPI and 6xUART peripherals.

Only **$75.44**

ORDER CODE 189-321201

Industrial Grade Pinguino Maple Board

PIC32-PINGUINIO-OTG



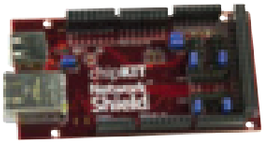
ARDUINO like board with PIC32MX440F256H with USB OTG

- PIC32MX440F256H 80 Mhz microcontroller 256KB Flash 32KB RAM
- Power supply voltage from 9 to 30V DC
- Industrial temperature range -25 to +85C

Only **$39.70**

ORDER CODE 206-132801

TDGL006 - chipKIT Network Shield



The chipKIT Network Shield expands the capabilities of the chipKIT Max32™

Features:

- 10/100 Ethernet
- USB Host, Device, OTG
- Dual CAN transceivers
- Dual I2C connectors
- 245Kbit EEPROM
- 32.768 KHz oscillator for RTCC

Only **$76.40**

ORDER CODE 193-657201

MPLAB® ICD 3 In-Circuit Debugger/ Programmer

DV164035

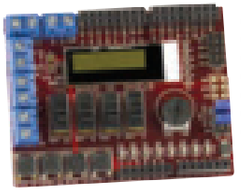
Incuded:

- MPLAB ICD 3 In-Circuit Debugger module
- USB cable
- 6 inch RJ-11 modular cable from MPLAB ICD 3 to target
- Interface test module
- CD containing MPLAB IDE software and product documentation

Only **$229.99**

ORDER CODE 166-487801

TDGL005 - chipKIT Basic I/O Shield



Features:

- 128x32 OLED Graphic Display
- Digital temperature sensor
- 256kbit EEPROM
- 4 switches
- 4 push buttons
- 8 LEDS
- 4 Open drain transistor outputs
- Analog potentiometer

Only **$52.77**

ORDER CODE 193-657101

PICkit™ 3 In-Circuit Debugger

PG164130

Features include:

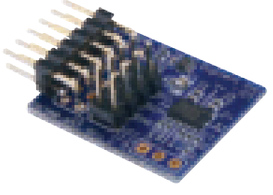
- Real-time execution
- Built-in over-voltage/short circuit monitor
- Low voltage to 5V (1.8-5V range)
- Diagnostic LEDs (power, active, status)
- R/W program and data memory of µC
- Erase of all memory types with verification
- Peripheral freeze at breakpoint

Only **$54.82**

ORDER CODE 177-132301

3-axis Digital Accelerometer

PmodACL™



PmodACL™ is powered by Analog Devices ADXL345

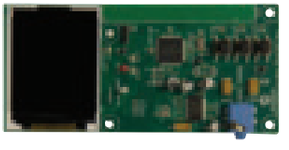
- User-selectable resolution
- Single-tap/double-tap detection
- Activity/inactivity monitoring
- Free fall detection
- SPI and I2C interfaces

Only **$48.86**

ORDER CODE 206-187301

PIC32MX1/MX2 Starter Kit

DM320013



Features include:

- 24Bit Audio playback
- Integrated Programmer Debugger
- USB Powered
- Color TFT Dispaly - 220 x 176 pixel
- mTouchTM slider and buttons
- PIC32MX220F032 with 32KB of Flash, 8KB RAM
- Micro SD Flash Card

Only **$133.35**

ORDER CODE 206-104001

JTAG HS1 Programming Cable

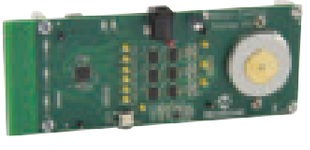
- Small, complete, all-in-one JTAG programming solution for Xilinx FPGAs
- High-Speed USB2 port can drive JTAG/ SPI bus at up to 30Mbit/sec
- Compatible with all Xilinx tools

Only **$67.87**

ORDER CODE 206-185001

Motor Control Starter Kit with mTouch Sensing

DM330015



Complete hardware and software tool suite for evaluating Microchips ultra-low cost Motor Control Family dsPIC DSCs. It contains a single board with BLDC motor, capacitive-touch sliders and a built-in debugger.

Only **$123.30**

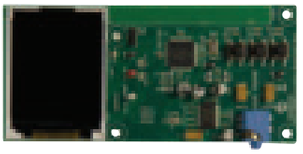
ORDER CODE 196-165101

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 42 Date: 20-01-12 time: 11:03

PIC32MX Audio Development Board

DM320011



Audio Development Board for PIC32 MCUs features and 80 MIPS PIC32 MCU, a 24 bit Wolfson audio codec, a two-inch color LCD Display, a USB interface, and an on-board microphone.

Only **$208.35**

ORDER CODE 197-190001

Base Level Workshop Kit

A000010

The Base Level Workshop Kit contains an Arduino Uno Board and all necessary components to participate in an Arduino Workshop

Only **$101.31**

ORDER CODE 184-869301

Development Starter Kit For Android™

DM240415

Standalone board used for evaluating and developing electronic accessories for Google's Android operating system for smartphones and tablets. It consists of the 16-bit PIC24F PIC MCU-Based development board and a software library available via free download.

Only **$111.33**

ORDER CODE 190-198001

AVRISP2 - In-System Programmer

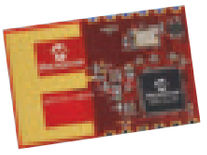
- Programs both Flash and EEPROM
- Supports fuses and lock bit programming
- Upgradeable to support future devices
- Adjustable programming speed
- Target interface and short circuit protection

Only **$50.28**

ORDER CODE 113-551701

2.4 GHz IEEE Std. 802.15.4™ RF Transceiver Module

MRF24J40MA-I/RM



- Supports ZigBee®, MiWi™, MiWi™ P2P and Proprietary Wireless Networking Protocols
- Surface Mountable - 0.7" x 1.1"
- Integrated Crystal, Internal Voltage Regulator-,Matching Circuitry and PCB Antenna
- FCC , IC , ETSI Certified
- Compatible with Microchip Microcontroller Families
- Up to 400 ft. Range

Only **$16.15**

ORDER CODE 163-020201

AVRDRAGON Emulator and Progammer

The AVR Dragon is a in-circuit emulator for AVR devices with 32KB or less Flash memory. It also supports programming modes for these and larger AVR devices, including in-system programming, high voltage serial programming, parallel programming and JTAG programming. Front-end software for the AVR Dragon is provided within AVR Studio. Host connection is via a USB interface.

Only **$71.12**

ORDER CODE 145-508801

Ultra Low-Power Sub-GHz Transceiver Module

The MRF89XAMxA is an ultra-low power sub-GHz surface mount transceiver module with integrated crystal, internal voltage regulator, matching circuitry and PCB antenna.

Mftrs. List No.	Description	Order Code	Price Each
MRF89XAM9A-I/RM	Transceiver Module - 915MHz	182-314401	14.50
MRF89XAM8A-I/RM	Transceiver Module - 868MHz	187-530701	11.84

XL_STAR Board - Demonstration Board and Debugger

Features & Benefits:

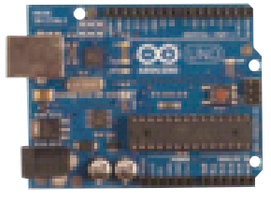
- The XL_STAR offers a complete MCU development environment
- The complete BOM for XL_STAR is available from element14, ex-stock
- The MC9S08MM128 from Freescale offers some industry leading peripheral on-chip modules, notably the 16-bit ADC

Only **$38.09**

ORDER CODE 186-456501

Arduino Uno

A000046

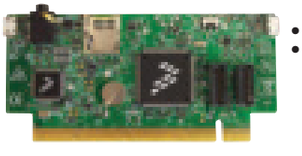


Microcontroller: ATmega328
Operating Voltage: 5V
Recommended Input Voltage: 7-12V
Maximum Input Voltage: 6-20V
Digital I/O Pins: 14 (6 for PWM O/P)
Analog Input Pins: 6

Only **$42.35**

ORDER CODE 184-868701

Kinetis KwikStik



- Ultra low-cost
- All-in-one development tool for evaluating, developing and debugging Kinetis MCUs.
- It features the K40X256VLQ100 (144LQFP) MCU with USB, Touch Sensing and Segment LCD functionality.

Only **$48.03**

ORDER CODE 189-237801

Arduino Mega 2560

A000047

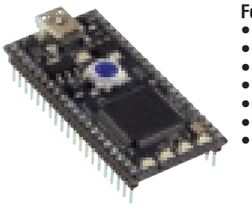
- Microcontroller: ATmega2560
- Operating Voltage: 5V
- Recommended Input Voltage: 7-12V
- Maximum Input Voltage: 6-20V
- Digital I/O Pins: 54 (14 for PWM O/P)
- Analog Input Pins: 16
- DC Current per I/O Pin: 40mA
- DC Current for 3.3V Pin: 50mA
- Clock Speed: 16MHz

Only **$83.07**

ORDER CODE 184-868801

MBED Prototyping Modules

OM11043



Features:

- 40-pin DIP, 0.1" pitch
- Programmed via USB
- 60MHz ARM, 32KB RAM, 512KB flash
- Ethernet, USB slave
- 2xSPI, 2xI2C, 3xUART, 1xCAN
- GPIO, 6xPWM, 6xADCs, 1xDAC
- C++ libraries and toolchain

Only **$83.73**

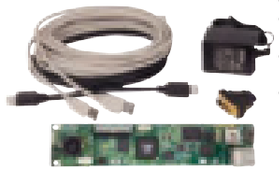
ORDER CODE 176-117901

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 43 Date: 20-01-12 time: 11:03

HDR-60 Video Camera Development Kit

LFE3-70EA-HDR60-DKN



- FPGA-based image signal processing
- Fully production-ready HDR camera design
- 1080p capable @ 60 frames per second
- Supports up to 16 Megapixel Sensors and 2 sensors simultaneously

Only **$628.59**

ORDER CODE 206-427501

MachXO2 Pico Development Kit

LCMXO2-1200ZE-P1-EVN

Battery-powered, low-cost evaluation platform to accelerate the evaluation of MachXO2 PLDs

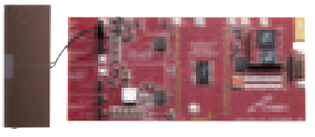
- MachXO2-1200ZE device
- 7-segment LCD display
- I2C temperature sensor
- Expansion header for I2C, JTAG, and GPIO interfacing.

Only **$66.72**

ORDER CODE 206-427601

EnerChip™ EP Universal Energy Harvesting Evaluation Kit

CBC-EVAL-09



Accepts inputs from solar, piezoelectric, thermoelectric or electromagnetic EH transducers. Features the EnerChip EP CBC915 Energy Processor Chip and EnerChip Solid State Batteries.

Only **$166.37**

ORDER CODE 206-153501

Beaglebone Development Board

BB-BONE-000

Features Include:

- 700-MHz superscalar ARM Cortex™ -A8
- 256MB DDR2 RAM
- 1-port USB 2.0 host
- Ethernet connectivity
- 2GMicroSD card
- 3.3V 2× 46-pin peripheral with multiplexed LCD signals and battery-control expansion headers
- JTAG via USB
- Board size: 3.4"× 2.1"

Only **$126.20**

ORDER CODE 206-362701

CY8CKIT-001B PSoC® Development Kit

Provides a common development platform where you can prototype and evaluate different solutions using any one of the PSoC 1, PSoC 3, or PSoC 5 architectures.

Only **$345.62**

ORDER CODE 190-843201

XPort® Embedded Ethernet Device Server

Smaller than your thumb, it includes all essential networking features, including a 10Base-T/100Base-TX Ethernet connection, proven operating system, an embedded web server, e-mail alerts, a full TCP/IP protocol stack, and 256-bit AES encryption for secure communications (optional).

Only **$87.63**

ORDER CODE 129-788301

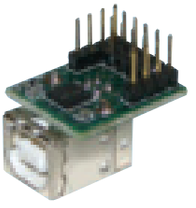
USB based Converter Cables

Cables provide simple easy-to-use connectivity for many USB conversion applications.

Mftrs. List No.	Description	Order Code	Price Each
US232R-10-BST	RS232 Serial Converter Cable - 10cm	161-583801	55.33
UC232R-10	RS232 Serial Converter Cable - 10cm	161-583901	39.00
US232R-100	RS232 Serial Converter Cable - 100cm	132-931001	43.66
USB-RS422-WE-1800-BT	RS422 Serial Converter Cable - 1.8m	174-035901	49.26
USB-RS485-WE-1800-BT	RS485 Serial Converter Cable - 1.8m	174-035701	40.90
TTL-232R-3V3	USB - TTL Serial Cable 3.3V	132-931101	18.45

Mini USB- Serial UART Development Module

MM232R



The MM232R is a mini development module for the FT232RQ IC device. It is a little bigger than a USB connector, and provides USB - Serial UART interface in an extremely small package. It is ideal for new development purposes, and also for adding a USB interface to existing product designs.

Only **$21.21**

ORDER CODE 114-603701

TTL to USB Serial Converter Cables & PCB

Features Include:

- Provides a USB to TTL Serial UART interface
- On board FT232RQ provides single chip USB to asynchronous serial data transfer interface
- Entire USB protocol handled by the electronics on the cable USB/PCB

Mftrs.List No.	Order Code	Price Each
TTL-232R-WE	174-036401	24.47
TTL-232R-3V3-WE	174-036501	24.47
TTL-232R-PCB	174-036601	21.75

USB to TTL Serial Converter Cable

TTL-232R-3V3

This range of USB-to-UART/FIFO controllers are designed to have a high functionality as well as a low component count. A number of configurations are available. All are USB2.0 compatible and also UHCI/OHCI and EHCI controller compatible. They include an intergrated 6MHz -48MHz clock multiplier and use a 4.35 to 5.25V single supply operation.

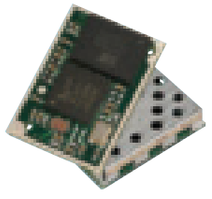
USB To TTL Level Serial Converter Cable

Only **$18.45**

ORDER CODE 132-931101

Bluetooth® AT Data Module

BTM411



- Bluetooth v2.1+EDR
- Secure Simple Pairing support
- Comprehensive AT interface
- Class 2 output - 4dBm
- UART interface
- Wi-Fi co-existence

Only **$32.05**

ORDER CODE 185-773501

Bluetooth RS232 Serial Adapter

with External SMA Antenna

Provides RS232 cable replacement for devices which use RTS/CTS flow control or DTR DSR Handshaking and can operate up to a range of 100m with standard antenna (2 dBi) and upto 1000m with optional antenna (5,7,9 dBi)

Only **$88.72**

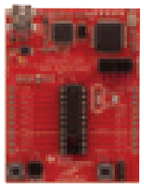
ORDER CODE 205-724601

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

P 44 Date: 20-01-12 time: 11:03

LaunchPad Experimenter Board

MSP-EXP430G2



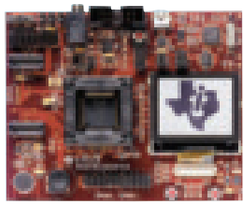
LaunchPad is a complete USB-based development and experimenter tool providing everything you need to launch your own MSP430TM Value Line applications.

30% OFF

Only **$5.95**

ORDER CODE 185-379301

MSP430F5438 Experimenter Board

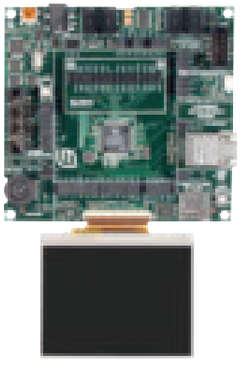


The Experimenter Board helps designers quickly learn and develop using the new F5xx MCUs, which provide the industry's lowest active power consumption, more memory and leading integration for applications such as energy harvesting, wireless sensing and automatic metering infrastructure (AMI).

Only **$207.89**

ORDER CODE 174-034301▲

Stellaris® DK-LM3S9D96 Development Kit



Development platform for Ethernet, USB OTG/Host/Device and CAN enabled Stellaris ARM® Cortex™ -M3-based MCUs.

Features Incude:

- Stellaris LM3S9D96 MCU
- Bright 3.5" QVGA LCD touch-screen display
- Navigation POT switch and select pushbuttons
- Integrated Interchip Sound (I2S) Audio Interface
- 8 MB SDR SDRAM module
- 1 GB MicroSD Card, 128 MB USB Flash Drive
- Ethernet,CAN ribbon, USB and JTAG cables

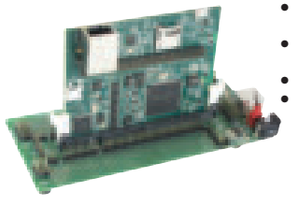
Kit Contents:

- DK-LM3S9D96 Development Board
- 8MB SDRAM Expansion Board
- Ethernet Ribbon & USB Cables, CD
- Features: Simple Set-up, Colour LCD Graphics Display
- 10/100 BaseT Ethernet, 1MB Serial Flash Memory

Only **$588.53**

ORDER CODE 205-724501

H52C1 Concerto Experimenter Kit



- F28M35H52C1 microcontroller based controlCARD.
- Docking station with access to all controlCARD signals
- No external emulator required
- Fully powered from USB connection

Only **$262.74**

- Code Composer Studio™ IDE v4 included

ORDER CODE 196-171601▲

Bluetooth® Low Energy CC2540 Mini Development Kit

CC2540DK-MINI

Provides a working reference design for software development of single-mode Bluetooth® low energy (BLE) applications based on the Texas Instruments CC2540.

Only **$138.14**

ORDER CODE 190-187801▲

TMP006 Evaluation Module

The TMP006 is an infrared thermopile sensor with digital output integrated circuit. This device measures the temperature of an object without making contact, making it ideal for many types of applications.

- TMP006EVM test board
- SM-USB-DIG platform controller
- USB Extension cable
- Ribbon type extension cable
- Software CDROM

Only **$68.39**

ORDER CODE 190-947001▲

MSP430 USB Debugging Interface

MSP-FET430UIF

Features Include:

- MSP430 debugging interface
- Supports both JTAG and Spy-Bi-Wire (2-wire JTAG) debug protocols
- USB cable and a 14-conductor target cable
- Integrated IAR Kickstart user interface

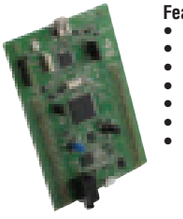
20% OFF

Only **$138.14**

ORDER CODE 117-223501

STM32F4 High-Performance Discovery Board

STM32F4DISCOVERY



Features Include:

- 32-Bit ARM Cortex-M4F core
- 1 MB flash
- 192 kB RAM
- USB or 5V PSU
- MEMS 3 axis accelerometer
- MEMS audio microphone
- Audio DAC with class amplifier

Only **$22.83**

ORDER CODE 200-927601●

Raisonance's Primer

Evaluating and developing applications for the STM32 microcontrollers.Includes everything needed to understand the STM32's peripheral implementation and operation.

Kit Contents:

- EvoPrimer Base
- STM3210EPRIM-D Target Board

Features:

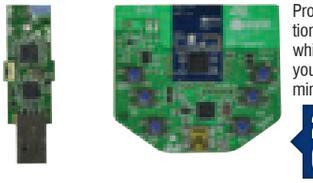
- Ergonomic Design MEMs-based Controls, Micro SD Card Connector

Only **$163.92**

ORDER CODE 206-818101

STM32W Low-Cost RF Control Kit

STM32W-RFCKIT



Provides demonstration applications and documentation which serve as a reference for creating your own applications and reprogramming the STM32W108xx microcontroller.

20% OFF

Only **$54.09**

ORDER CODE 187-937801

STM32L Ultralow Power Discovery Board

STM32L-DISCOVERY

Helps to discover the STM32L ultralow power features and to develop and share your applications.It is based on an STM32L152RBT6 and includes an ST-Link/V2 embedded debugging tool interface, an LCD (24 segments, 4 commons), LEDs, pushbuttons, a linear touch sensor or touchkeys.

30% OFF

Only **$17.24**

ORDER CODE 187-698701

C = CYAN M = Magenta Y = Yellow B = Black/NZBK1

element14

named *"most effective electronics industry brand online"* by **Heardable Inc.**

THE EXPERTS AGREE

element14 is the best site for accessing the electronics information you need.

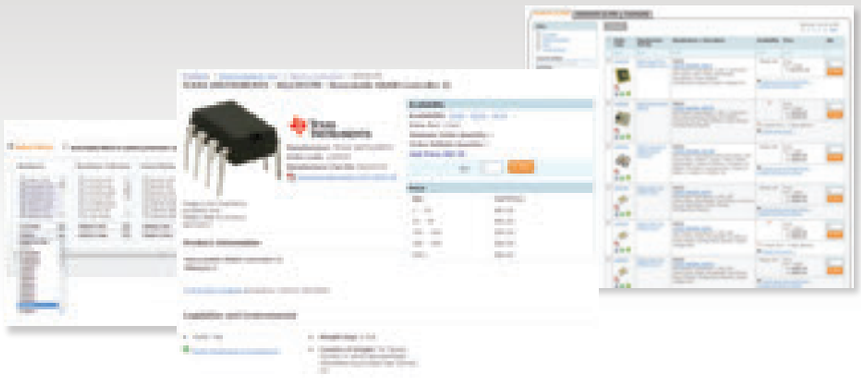
THANKS TO YOUR FEEDBACK WE'RE MAKING OUR WEBSITE **SIMPLER, SMARTER, FASTER.**

Search improvements

Simplified search experience
Minimum and maximum range selectors
Improved product results and sorting

Product details page improvements

Simplified product detail page
New content
Social media



Go to **http://nz.element14.com/improvements** for full details.

Search improvements

Simplified search experience
With an extensive product catalogue, we're always looking for ways to make it simple to find what you are looking for. So we've moved some of the filters to the left pane for ease of use, giving you quicker access to your results.

Improved product results and sorting
We have improved our product results by including all the product attributes relevant to your search, which you can sort by. We've also created a column for manufacturer part number giving you one more way to conveniently sort your results.

Product detail page improvements

Simplified product detail page
The products we carry come with a wealth of information so you can make an informed purchase. Now we've taken all the info you could need and made it easier for you to scan it all in one spot. Plus, we've moved the datasheet to the top of the page for faster access. We have also continued to add supporting videos to the product detail pages and created a dedicated section, to allow quick-view videos directly from the product page.

BRIGHT IDEAS. STOCKED HERE.

Let element14 bring your ideas to life with an array of 10,000 lighting products and solutions, including design resources like application guides, white papers, notes and more. And with local service and technical help, you can count on us to support your needs – 24/7.

As a part of the Premier Farnell group, element14 brings you 70+ years of trusted electronics distribution expertise, along with an innovative online engineering community, where you can collaborate with experts, access technical information and use helpful tools. So trust element14 to power all your bright ideas. Visit **http://nz.element14.com/lightingsolutions** to find out more.

Global portfolio of industry leading manufacturers:

AVAGO TECHNOLOGIES · Chicago Miniature Lighting, LLC *Lighting the world since 1910* · CREE · LINEAR TECHNOLOGY · molex one company > a world of innovation · TE connectivity · Texas Instruments

HOW MAY WE HELP YOU TODAY?

WEBSITE:
nz.element14.com/lightingsolutions

MOBILE SITE: m.element14.com

PHONE:
0800 90 80 80

FAX:
0800 90 80 81

TECHNICAL SUPPORT:
nz-technical@element14.com

SALES:
nz-sales@element14.com

FLEXIBLE PAYMENT OPTIONS:

element14

The new global face of Farnell